

Nepal

Contraceptive and Drugs Logistics System

Review of
Accomplishments and
Lessons Learned
(1993–2000)

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FPLM

The Family Planning Logistics Management (FPLM) project is funded by the Center for Population, Health and Nutrition for the Bureau for Global Programs, Field Support and Research of the U.S. Agency for International Development (USAID). The agency's Contraceptives and Logistics Management Division provides a centralized system for contraceptive procurement, maintains a database on commodity assistance, and supports a program for contraceptive logistics management.

Implemented by John Snow, Inc. (JSI), (contract no. CCP-C-00-95-00028-00), and subcontractors (The Futures Group International and the Program for Appropriate Technology in Health [PATH]), the FPLM project works to ensure the continuous supply of high-quality health and family planning products in developing countries. FPLM also provides technical management and analysis of two USAID databases, the contraceptive procurement and shipping database (NEWVERN); and the Population, Health and Nutrition Projects Database (PPD).

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Acronyms

ACDP	Annual Commodity Distribution Program
ARI	acute respiratory infection
CDC	Centers for Disease Control and Prevention
CA	collaborating agency
DHO	District Health Officer
DDA	Department of Drug Administration
DHS	Department of Health Services
DPNO	District Public Health Officer
FCHV	Female Community Health Volunteer
FPLM	Family Planning Logistics Management project
FEFO	first-to-expire, first-out
HP	health post
HMG	His Majesty's Government (Nepal)
ICP	inventory control procedures
JSI	John Snow, Inc.
KfW	Kreditanstalt für Wiederaufbau (Germany)
LIP	logistics improvement plan
LMD	Logistics Management Division
LMIS	logistics management information system
LSIP	logistics system improvement plan
MASS	Management Support Services Pvt. Ltd.
MOH	Nepal Ministry of Health
NGO	nongovernmental organization
NHTC	National Health Training Center
OJT	on-the-job training
ORS	oral rehydration salts
RD	Regional Directorate
RHTC	Regional Health Training Center
RMS	Regional Medical Store
RPM	Rational Pharmaceuticals Management Project
SDP	service delivery points
SHP	sub-health post
TA	technical assistance
UNFPA	United Nations Population Fund
USAID	U.S. Agency for International Development
WHO	World Health Organization

Preface

This report details the efforts of John Snow, Inc., through its bilateral project and through the Family Planning Logistics Management project, funded by the U.S. Agency for International Development, to help the government of Nepal establish an effective contraceptive and drugs logistics system.

This review, undertaken in January and February 2000, involved the collection of quantitative data through extensive field visits, qualitative data through key informant interviews with major stakeholders and a review of existing reports and a literature review. Discussed in this report are the study protocol, the setting in which the logistics management information system has been developed, and the results of the study. Also discussed are the lessons learned from the Nepal experience that may be generalized to other countries and the recommendations of the study team for future logistics management efforts in Nepal.

We extend our gratitude to the many dedicated people who assisted in making this activity a success. While it is not possible to name everyone, we pay special thanks to the following:

In the JSI/Nepal office Penny Dawson, Frank White, and Janardan Lamichhane, whose eagerness to take a fresh look at their project allowed the assessment team to carry out its works unimpeded; the other members of the JSI/Nepal central logistics team, Nyanath Paudel, Udev Maharjan, Heem Shakya, and S.B. Singh, provided the team with excellent briefings on their work; the JSI/Nepal Regional Logistics Advisors, who accompanied team members over all types of terrain and whose knowledge of the Nepal health logistics system was vital to our understanding and formation of our findings and recommendations of the JSI central logistics team; and, finally, to all the JSI/Nepal drivers who transported the team from place to place safely.

Thanks also to the USAID Mission to Nepal for their interest and support and to all the people of Nepal who gave their time and knowledge to this review. We also acknowledge the staff at FPLM/Washington, particularly Dana Gelfeld, who contributed to and edited the final report for publication, as well as other senior staff who reviewed the report for technical content.

Executive Summary

The Family Planning Logistics Management (FPLM) project was a five-year project (1995–2000) funded by the U.S. Agency for International Development (USAID). Implemented by John Snow, Inc. (JSI), the FPLM project works to ensure the continuous supply of high-quality health and family planning products in developing countries. The project has been providing technical assistance to His Majesty's Government of Nepal since 1981.

The study described in this report, which took place in January and February 2000, had the goal of reviewing the contraceptive and drugs logistics system in Nepal from 1993 to 2000, to assess its current performance and to provide recommendations for the future.

After pilot testing and revising the quantitative and qualitative data collection instruments, three teams of investigators covered all five regions, all types of geography, and all levels of the system (75 sites in all) in a two-week data collection exercise.

Results show that the logistics management information system (LMIS) is in place and functioning at all levels, partly as a consequence of the provision of technical assistance to establish a functional LMIS unit at the Logistics Management Division (LMD). This unit is now under threat because of funding cuts that could jeopardize the whole LMIS.

Forecasting and procurement of contraceptives and drugs are undertaken annually for usually a five-year period. Donor commitments for contraceptives are adequate until 2001 for most contraceptives but there is a shortfall of some \$7.5 million to 2004. The situation for drugs is less clear because the last full-scale quantification process was performed in 1995.

For warehousing the regional level seems satisfactory, but at the district level space and suitability of buildings are a problem. At the service delivery points (SDP), storage is generally satisfactory, although too many commodities are stored next to the walls, leading to damage to stock from water and insects.

In general the distribution system works well, despite occasional vehicle maintenance problems, some lack of transport at SDP level, and the remoteness of some of the SDPs. The once-a-year delivery of contraceptives and drugs to the District and Regional warehouses respectively works well in the country. Stock levels for contraceptives were good, showing there were no stockouts of condoms and Depo-Provera® at the SDP and District levels. Only pills were stocked out at the SDP level. For drugs the situation was worse, with pediatric cotrimoxazole stocked out in more than 30 percent of the SDPs surveyed in the sample. The other drugs looked at (vitamin A, oral rehydration salts (ORS), and ferrous sulfate with iron) were not as badly stocked out at this level.

The number of staff at the districts and SDPs seem sufficient to manage the logistics system. However, at the Central level the LMD seems to have too many storekeepers and not enough mid-level managers to run such a large, complex system. Add to this the uncertainty of the LMIS unit continuation, and there are problems for organization and human resources. Training in logistics is well institutionalized in the country, but hardly sustainable as the donors fund much of this at the training centers.

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Five main lessons come out of the study.

- Cultural and political barriers to an efficient supply chain system may be too strong for training alone to be effective without also focusing on changing behaviors through better monitoring and supervision.
- Appropriate reward structures for personnel influence the supply chain system.
- System institutionalization depends on it being “owned” by the government.
- Influencing sustainability is usually out of the control of technical assistance providers.
- Monitoring and supervision are key factors in improving system performance.

A range of recommendations follow, some for implementation by JSI, some by LMD, and others by the donors.

First, under LMIS there needs to be a greater emphasis on the roles of the District Health Officer (DHO), District Public Health Officer (DPHO), and district storekeepers logistics functions, especially in monitoring and supervision skills. These supervisors, therefore, need to be trained to make timely use of health post (HP) and sub-health post (SHP) quarterly LMIS reports before forwarding the reports to the Central level.

At the Central level, the LMIS is threatened because of the informal nature of the LMIS unit, its staffing, and its funding. If investment in the system is to be saved, serious decisions must be made soon. One is the return of the two LMD senior positions loaned elsewhere in the Ministry of Health (MOH) and another is that LMIS unit must be firmly established within the MOH/LMD and allocated funding to provide at least—

1. One senior position to supervise the LMIS
2. Two full-time data entry personnel to operate the unit
3. Printing of LMIS forms and reports

For forecasting and procurement MOH/LMD and JSI must work together to secure commitments from donors or His Majesty’s Government of Nepal (HMG) for contraceptives required for 2000 through 2004. UNFPA should assume this responsibility to ensure donor coordination.

Under warehousing and storage, a number of mainly minor issues linked to supervision and monitoring need to be addressed. These include drafting job descriptions, encouraging district stores to carry out physical inventories once per quarter, and increasing supervision to reinforce adherence to storage guidelines. However, one major recommendation is to intensify MOH efforts to locate donors to construct appropriate district storerooms.

Under distribution and inventory control, it was recommended to continue using LMIS data to determine the Annual Commodity Distribution Program (ACDP) issue quantity for contraceptives and essential drugs; to solve transport problems; and for district-level supervisors to facilitate appropriate disposal of unusable commodities twice a year.

For organization and human resources, it was recommended to strengthen on-the-job-training and supervision through the use of the logistics checklist and procedures manuals. Also, prior to creating a

dedicated cadre of District-level logistics personnel, the DHO, DPHO, or district storekeeper must be trained to use logistics information for decision making and encouraged to make adequate supervision visits to various district facilities. It was also recommended that Regional Health Training Centers (RHTC) be provided an adequate ongoing budget for maintenance and repair of essential equipment to carry out required training courses and that these training courses be regularly monitored by the National Health Training Center (NHTC) and by LMD.

Last, it was recommended that under policy and adaptability, JSI with LMD must continue to identify and nurture logistics champions within HMG.

For fuller institutionalization to take place, JSI must transfer skills to HMG counterparts over the next two years, and must decrease involvement in the direct implementation of logistics activities (e.g., LMIS unit supervision, commodities distribution) and continue technical assistance and skill transfer.

For greater sustainability to be affected, LMD resources must be reallocated to give adequate attention to all major logistics activities (e.g., LMIS, training, monitoring, policy/donor coordination, distribution and warehousing, procurement, forecasting); and a separate supervisory position for key LMD activities must be created.

Monitoring and supervision are of utmost importance for an efficient logistics systems and therefore HMG are encouraged to use more effective mechanisms for monitoring and supervision at all levels. Appropriate mechanisms include—

- Identifying appropriate supervision.
- Ensuring supervisors can move freely and independently.
- Ensuring supervisors can influence the performance of the staff they supervise.
- Enabling frequent monitoring and supervision.
- Providing non-monetary incentives for supervisors and the staff they supervise.

It is important that changes in system performance, personnel, and LMD be assessed. In addition, other program directors must be more involved with LMD than they have so far. It is important, therefore, to develop appropriate indicators to assess all levels of the logistics system to be used by and on LMD to measure progress.

As Nepal is very dependent on donors to provide contraceptives and drugs, it is recommended that this funding be tied to financial or other HMG commitments in logistics and that phaseout of donor funding for logistics occur only after assessments of sustainability are undertaken. This effectively means that donor funding for logistics must continue for at least five years in areas such as the LMIS unit, improving/constructing storage facilities, transportation, monitoring and supervision, maintenance of RHTC infrastructure, logistics management training, and development of monitoring and evaluation indicators.

Donor health and family planning programs in Nepal are dependent on the supply of commodities. The highly acclaimed vitamin A program is dependent on having vitamin A capsules in the hands of more than 50,000 Female Community Health Volunteers (FCHV). This requires logistics. Family planning camps require kits and quality medical supplies. This means logistics. The acute respiratory infection (ARI) program requires cotrimoxazole—this means more logistics. For these reasons, and because logistics is an essential part of the system, donors are advised to look closely at the impact of any

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reduction in support to the HMG logistics system on the health programs they fund before withdrawing funding for logistics.

1.0 Goal and Objectives

The goal of this assessment was to review the current contraceptives and drugs logistics system in Nepal from 1993 to 2000, to assess its current performance, and to provide recommendations for the future.

To accomplish this goal, the Family Planning Logistics Management project (FPLM) identified the following objectives:

- To assess the status and function of all logistics components (donated contraceptives and drug commodities) at all levels of the Nepal supply chain.
- To gather selected logistics indicators for all levels of the Nepal Ministry of Health (MOH) system.
- To assess and evaluate the impact of the training strategy and implementation for logistics.
- To evaluate the extent of institutionalization of logistics functions in the system.
- To gather “lessons learned” from the technical assistance process in Nepal during the previous seven years.
- To use the data to form strategic plans for future technical assistance.

2.0 Technical Assistance Strategy

John Snow, Inc. (JSI), began providing logistics technical assistance in Nepal in 1981. The assessment team narrowed its assessment to the seven-year period to between 1993 and the present, when the majority of FPLM technical assistance interventions occurred. Most of this technical assistance is concerned with implementing the Logistics System Improvement Plan (LSIP), which moves through three phases—implementation (I), expansion (II), and consolidation (III).

2.1. Technical Assistance (1993 to 1996)

In 1993, the Nepal Ministry of Health (MOH) established the Logistics Management Division (LMD) with the support of various collaborating agencies (CA) so logistics could become a central component of its family planning programs. The creation of the LMD was instrumental in the hiring of two central and four regional staff in the JSI/Nepal office to support LMD in logistics activities. As one of their initial activities, JSI and LMD jointly formulated the LSIP. Input into the LSIP came from the Centers for Disease Control and Prevention (CDC); the Rational Pharmaceutical Management (RPM) project; and two local nongovernmental organizations (NGO), New ERA and Management Support Services (MASS). The Department of Health Services (DHS) and the Department of Drug Administration (DDA) of MOH also contributed to the LSIP. In March 1994, His Majesty's Government (HMG) approved the LSIP. In August, implementation began on a pilot basis in four Eastern Region districts.

The four pilot districts were evaluated in March 1995. As a result, a phased implementation of the logistics system to other regions began in May—Phase I (Implementation Phase). By 1996, in response to the expanding activities, JSI/Nepal had increased staff to four in the central office and nine in the country's five regions. At this time, implementation of the LSIP focused on the following:

- Implementing the new logistics management information system (LMIS).
- Reconciling the LMIS form and the stockbook to ensure they contained the same generic drug names (assistance by RPM).
- Developing storage guidelines.
- Dejunking district stores through a subcontract with a local NGO (MASS), which included write-off, and disposal and auction of unusable commodities.
- Commencing of training orientation using New ERA.

2.2. Technical Assistance (1997 to 2000)

In 1997, USAID/Nepal awarded JSI a five-year performance-based bilateral contract comprised of two main elements: one focused on child health and the other on logistics management for contraceptive and essential drugs supplies. The goal of the logistics initiative was to institutionalize a sustainable, effective and efficient health logistics system.

For the first two years activities focused on supporting the work of LMD, and the LMIS was revised and simplified. Technical assistance was received from FPLM/Washington to assist in the design and development of logistics training modules. A core team of local logistics management trainers trained

store personnel under a pilot project that introduced inventory control procedures (ICP) in four Eastern Region districts.

ICP is a system of monitoring the level of supplies at each level of the system using *maximum* and *minimum* stock levels. In other words, contraceptives and essential drugs are ordered at each period to bring stock levels back up to a maximum amount of “months of stock”—which is determined by the average consumption (quarterly or monthly) of the facilities. ICP was evaluated after one year and consequently extended to all Eastern Region districts. In the later half of 2000, the ICP will be extended to two additional regions, the Western and Far Western Regions.

JSI/Nepal also assisted in developing proposals for storage facilities for each district, based on its needs. These proposals used three models of different sizes (1,000, 1,500, and 1,900 sq. ft.) to fit each district’s needs. Six districts did not require a new store. At present, funding for district stores is being considered for the next World Bank loan.

This marked the end of Phase II, which was concerned with expansion of the LSIP.

JSI/Nepal is in the last two years of its bilateral agreement, and Phase III of the LSIP is concerned primarily with consolidation, documentation, and institutionalization. However, the ICP expansion has yet to take place across the country, and uncertain funding of the LMIS unit, where staff are about to be reduced from eight to four, jeopardize the information system.

2.3. Current Technical Assistance Strategy

The strategy of consolidating logistics functions through the LSIP using six Central level and eight regional-based field staff appears to be working well. The tasks for the field staff in their delivery of technical assistance are as follows:

- Assist MOH staff to prevent stockouts, expiries, and overstocking of all commodities.
- Assist in the use of the LMIS.
- Maintain store standards.
- Update recordkeeping by providing on-the-job training.
- Facilitate logistics coordination among Regional Directors (RD), District Health Officers (DHO), and service delivery points.
- Provide logistics training to international NGOs.
- Identify logistics system weaknesses and problem areas.
- Provide immediate on-site troubleshooting, such as—
 - repair/maintain or equip stores
 - move supplies internally
 - provide forms/registers during shortages
- Facilitate other logistics activities (auctioning, disposal, write-off).
- Supervise use of standard checklist.

- Monitor stock status through assisting Regional Medical Stores and DHOs to use LMIS.
- Assist in reporting and follow-up.
- Develop formats and procedures.

These tasks also apply to the Central level staff who have additional responsibilities for managing these activities from the capital. The posts are—

- Deputy Team Leader/Logistics Specialist
- Senior Logistics Advisor
- Logistics Advisor, Field Monitoring
- Logistics Advisor, Distribution
- Logistics Advisor, Training
- Logistics Advisor, LMIS

Much of the work at the Central level is in close collaboration with the LMD and LMIS unit and promotes institutionalization as much as possible. Activities include—

- Developing the LMD staff skills.
- Helping create/fill logistics division positions.
- Incorporating logistics training targets into HMG's ninth five-year plan.
- Enabling logistics training by the National Health Training Center's (NHTC) five Regional Health Training Centers (RHTC).

As part of the ultimate goal of sustainability, the Kathmandu team is working to—

- Rationalize the country levels receiving logistics support.
- Develop self-instructional guidelines/instructions for health workers.
- Include logistics as a topic in pre-service health worker training.
- Assist with the implementation of revolving drug funds.
- Promote logistics as a priority MOH program.
- Locate funds to construct district-level commodity storage-only stores.

Several other objectives, if achieved, seek to make the Nepal health logistics system more efficient. These include—

- Creating a pipeline report and increase its utilization by donors and the DHS.
- Increasing the number of facilities reporting logistics management information in a timely manner.
- Increasing the utilization of private transport carriers.

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- Decentralizing logistics resupply decisions to the district level.
- Reducing the level of buffer stock required to operate the system.

Finally, the technical assistance strategy intends to make the system more effective by implementing a system of supportive supervision performed by DHS staff and to reduce or eliminate key commodity stockouts.

3.0 Study Methods

3.1. Overview

Quantitative and qualitative methods were used to gather assessment data. Quantitatively, the FPLM/ Washington team designed a series of questionnaires/instruments for the service delivery points, district stores, and regional stores. Training questionnaires were designed to be administered to MOH staff trained two years prior to the assessment and staff at the RHTCs. Instruments were all tested at various sites in Kathmandu Valley, then revised and finalized before use by the assessment teams (see appendix A).

Three qualitative instruments were designed: (1) key informant interview guide, (2) questionnaires for district- and regional-level Public Health Officers and RHTC staff, and (3) anecdotal observations of the four FPLM principal investigators.

Data were also derived from JSI/Nepal staff, whose expertise was instrumental in providing context, history, and present situation of logistics activities.

3.2. Data Collection

The four principal investigators received an extensive briefing from the JSI central staff. Key informant interviews were carried out in Kathmandu in the first week. Regional Logistics Advisors (RLA) received training in Kathmandu on the instruments and evaluation procedures. The three teams pilot tested all instruments at various sites in Kathmandu Valley. The teams reconvened, reviewed findings, and agreed on revisions. This exercise took three days. By the end of the first week, the teams had agreed upon assessment instruments for use during the data collection phase.

Three teams comprising at least one FPLM investigator and one JSI RLA developed detailed schedules to cover the two-week fieldwork. During the data collection stage, the three teams traveled by private vehicle and airplane, and two teams walked extensively for as long as eight days. With three separate teams and two weeks for data collection, the teams were able to cover all five regions as well as all three geographic areas (mountains, hills, terai). At the end, the FPLM investigators returned to conduct more key informant interviews, compile and analyze their data, and record findings and recommendations. Prior to departure, the assessment team presented its initial findings and recommendations to all stakeholders.

3.3. Sample

The purposive sample used was representative of Nepal's various geographic topography and population sizes. Table 3.1 shows the numbers and types of facilities interviewed by region. Facilities varied by geographic location in terms of mountains, hills, and terai (approximately 5 percent, 20 percent, and 75 percent, respectively).

Table 3.1 Study Sample

	Regions					
Facility Type	Eastern	Central	Western	Mid-Western	Far-Western	Total
Regional Health Directorate	1	0	0	1	1	3
Regional Medical Store	1	0	2	1	1	5
Regional Health Training Center	1	1	1	0	1	4
District Health Officer/District Public Health Officer	3	0	3	1	2	9
District Store	4	1	5	2	2	14
Service Delivery Points (Health Posts, Sub-Health Posts, District Clinics, Primary Health Centers)	6	3	12	11	8	40
Total	16	5	23	16	15	75

4.0 Results

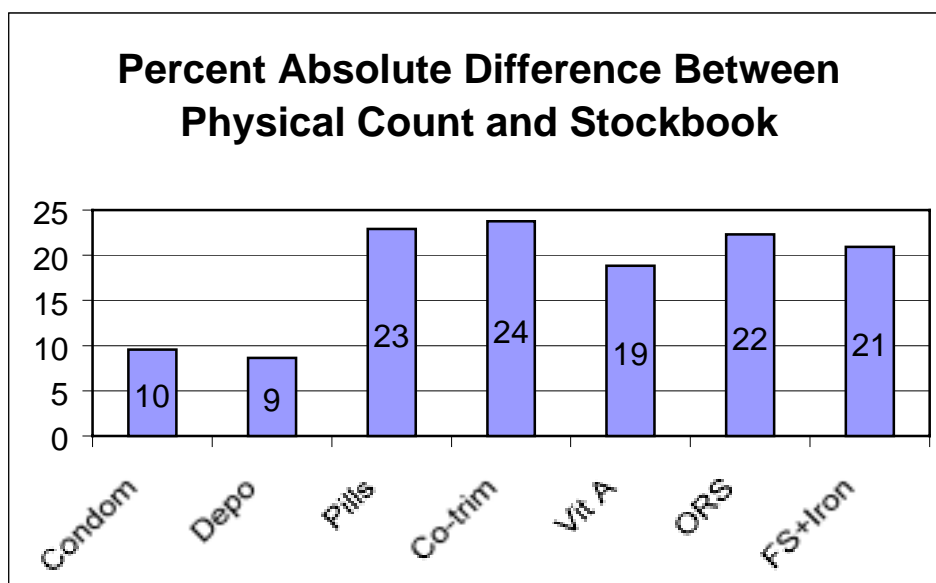
Results, organized into six logistics system components are from the whole country and every level of the logistics system. However, the findings are representative only of the regions visited by the study teams.

4.1. Logistics Management Information System

Overall, the LMIS was found to be functional with sound reporting and record systems countrywide. However, within the record systems, inaccuracies and errors were common and the reports were not being used for decision making.

The LMIS is in place and functioning at all levels. Records and reports collect data needed to manage a logistics system (stock on hand, losses/adjustments, quantities dispensed to clients). All facilities visited submitted the *Quarterly LMIS Report* according to the prescribed reporting schedule, and 100 percent knew where they should be sent. However, weak supervision of district storekeepers has lowered effective performance. As a result, LMIS forms had frequent and common errors. There were also frequent inconsistencies between the stockbook balances and the physical count taken by the review teams. There were many stockbook errors. Figure 4.1 shows the percent absolute (i.e., positive or negative) difference between the physical count and the stockbook record.

Figure 4.1
Stockbook Discrepancies



Losses, such as expiries and damaged commodities, were often unadjusted in the stockbook and stockbooks were not updated according to HMG regulations. HPs and SHPs were significantly better at updating stockbooks than district stores. It was not uncommon that receipts and issues had not been entered in the past month. A well-functioning logistics system depends on up-to-date, accurate data, which stockbooks should maintain. Accurate data is critical to decision makers.

JSI/Nepal provided significant technical assistance to establish a fully functioning LMIS unit responsible for inputting data from all health facilities and producing LMIS feedback reports for HMG regional and district-level personnel. These reports provide valuable reporting and stock status information. Of those at the district level trained within the last two years, 100 percent knew what decision to make if an LMIS feedback report showed stockouts at a service delivery point. While this is reassuring, the percentage of personnel who actually *used* these reports to make decisions was less impressive.

4.2. Forecasting/Procurement

LMD and the Family Health Division produce contraceptive forecasts with assistance from JSI/Nepal and other donors. Forecasts are usually undertaken annually and cover a period of five years, allowing a medium- to long-term perspective combined with immediate short-term needs. An unmet need for contraceptives beyond 2000 and a yearly shortfall for essential drugs exists. The most recent consensus forecast shows that, although there are donor commitments for Depo-Provera[®] and condoms to 2001, and oral pills, Norplant[®], and IUDs for 2000, there is an unmet need for contraceptives from 2001 to 2004 totaling \$7.5 million (see appendix B). These forecasts include logistics-based and demographic-based calculations that are reconciled into one consensus-based forecast for the whole country.

Forecasting for essential drugs is undertaken by the Department of Drug Administration based on previous year's consumption plus 10 percent. The last comprehensive needs quantification was carried out by the World Health Organization (WHO) in 1995. WHO is expected to repeat the exercise in 2000. Kreditanstalt für Wiederaufbau (Germany) (KfW) uses the figures to procure indent drugs (i.e., drugs on the essential drugs list that are day-to-day items that can be ordered by regions) for once-a-year delivery to the regions. In theory, shortfalls should be covered by regions and districts procuring drugs locally through a government-run drug supplier or private drug wholesalers. However, budget shortfalls often prevented this, leaving facilities stocked out of vital drugs.

The number of drug manufacturers in Nepal increased from nine to 18 between 1990 and 2000. While this has resulted in better availability of drugs on the market, it has also led to increasing difficulty in controlling the quality of combination drugs. Many companies are foreign-owned and controlling them has been a challenge. Government restrictions on drug production could cause drug manufacturers to close or threaten to close, perhaps resulting in job losses.

4.3. Warehousing and Storage

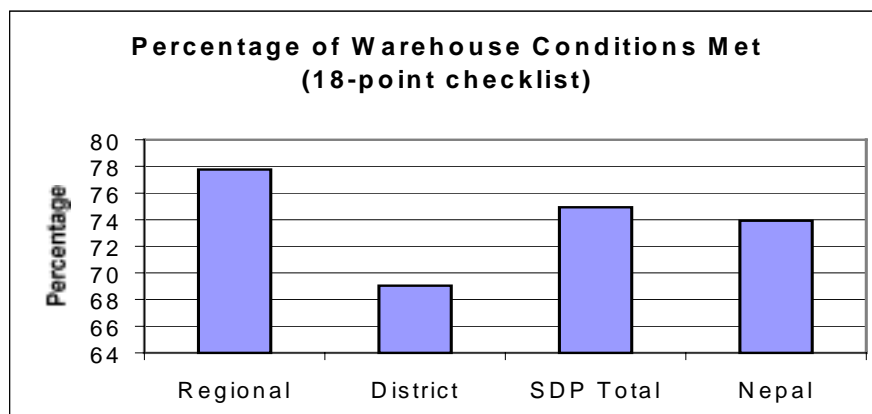
The government manages warehousing and storage of commodities, but monitoring of storage conditions is inconsistent and infrequent. For district level and below, where there are still real problems, JSI provides the majority of the monitoring and supervision. Regional facilities have been refurbished or newly built using World Bank credits.

Store cleanliness is a problem countrywide, as is getting storekeepers to take responsibility for ongoing maintenance. Most stores adhered to the storage guidelines provided to all facilities, and most follow first-to-expire, first-out (FEFO) distribution principles. Of an 18-point "storage checklist" the review team completed at every facility, an average of just over 70 percent was scored in following proper storage procedures. The storage checklist appears in appendix A-1 and A-2.

Observation and discussion with store personnel showed that while some newly constructed regional stores have sufficient storage space, most districts have insufficient space and conditions are not conducive to ensuring quality products. Conditions, such as dampness, lack of proper air circulation, and

insect and rodent infestation threaten the quality and availability of contraceptives and drugs, shorten their shelf life, and jeopardize client satisfaction.

Figure 4.2
Warehouse and Storage Conditions



District and regional stores perform two inventories a year per HMG requirements. Many conduct a physical count more frequently, although they do not record results in the stockbook or elsewhere. This was found mostly at below district-level facilities.

4.4. Distribution and Inventory Control

In general, the distribution system functions well despite occasional vehicle maintenance problems and per diem issues that delay receipt of commodities at SDPs. UNFPA funds a once-a-year delivery (ACDP) to regional and district stores of contraceptives provided by various donors.

Drugs and medical supplies are procured and distributed through a variety of mechanisms. KfW funds the majority of the cost of indent items procured by LMD and delivered by the suppliers to the Regional Medical Stores for repacking and shipment to SDPs. Program commodities (ORS, vitamin A, cotrimoxazole, etc.) are funded and procured by donors and/or HMG and shipped to the districts throughout the year.

The *LMIS Quarterly Report* tracks and documents system losses, though many facilities disposed of expired/damaged stock on site and did not record this in stockbooks or LMIS forms (as HMG regulations require). ICP had been introduced only in the Eastern Region, but LMIS data showed stock levels of all facilities. Annual deliveries of both contraceptives and essential drugs were being prepared for distribution, providing an opportunity to measure the stock status of the entire system. In figures 4.3 through 4.5, stock status is defined according to levels in table 4.1. Note that the team set these levels, and the system in Nepal (except the newly introduced ICP sites) does not organize stock according to these criteria.

Table 4.1 Months of Stock Defining Status

	Understocked	Stocked to Plan	Overstocked
SDP	<1	>1 and <4	>4
District	<1	>1 and <5	>5
Region	<3	>3 and <9	>9

(Stockouts are where months of stock are 0)

Figure 4.3
Stock Status: Condoms

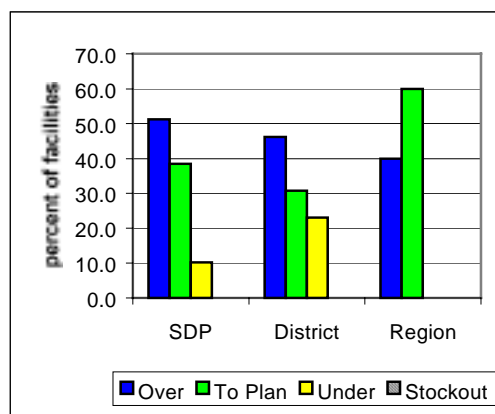


Figure 4.4
Stock Status: Depo-Provera®

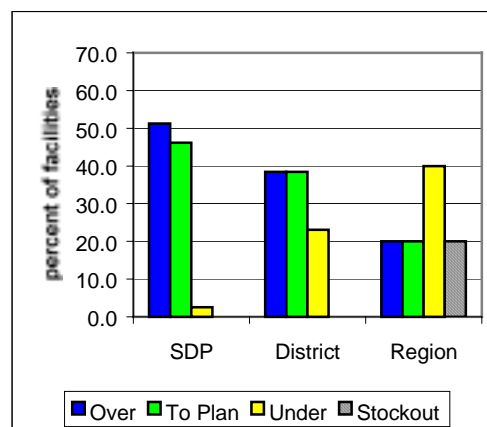
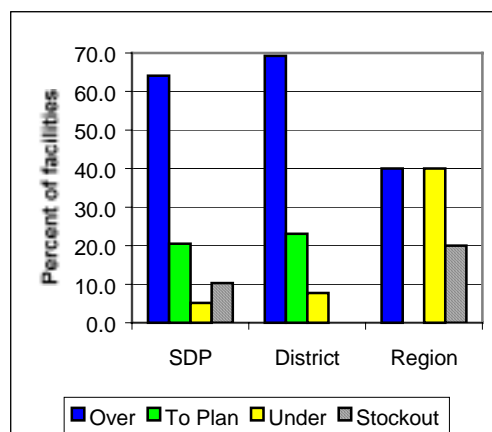


Figure 4.5
Stock Status: Oral Pills



Of the three contraceptives tracked, only oral pills were stocked out at any SDP, with understocks and stockouts accounting for 15 percent or less of the facilities at SDP level. On the whole, there was an overstock of most commodities. This is a positive sign because most of the facilities surveyed were not part of the ICP. Store personnel, therefore, had to use their own inventory management systems to prevent stockout and overstock situations.

Figures 4.6 through 4.9 show that stock levels for specific essential drugs were not as good as contraceptives. With the exception of oral rehydration salts (ORS), which showed similar results to

contraceptives, the other drugs were much more likely to be stocked out at the SDP. An inadequate stock of commodities is the main cause of stockouts of health commodities. Lack of transport between the SDP and district levels is also to blame. There were also complaints about the level of daily allowance for personnel to travel to collect commodities.

Figure 4.6
Stock Status: Cotrimoxazole (100/20mg)

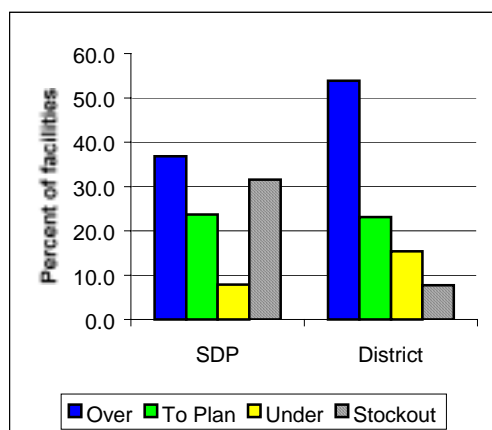


Figure 4.7
Stock Status: Vitamin A (capsules)

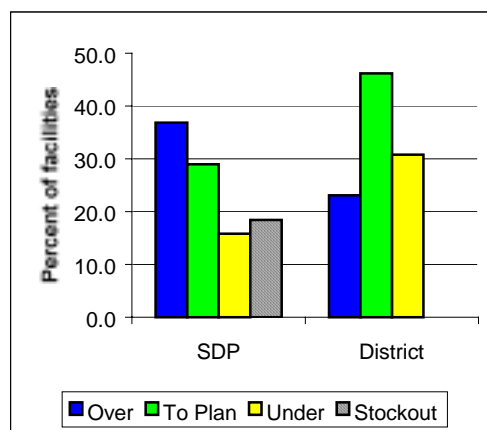


Figure 4.8
Stock Status: ORS (packets)

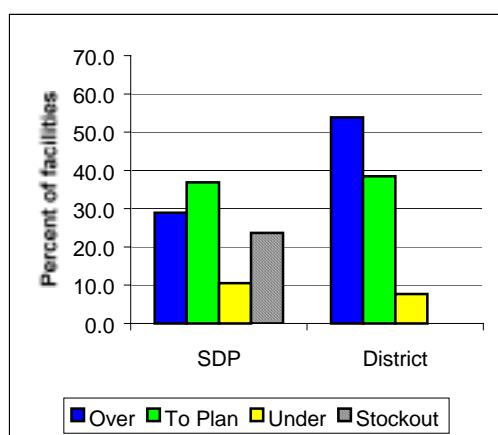
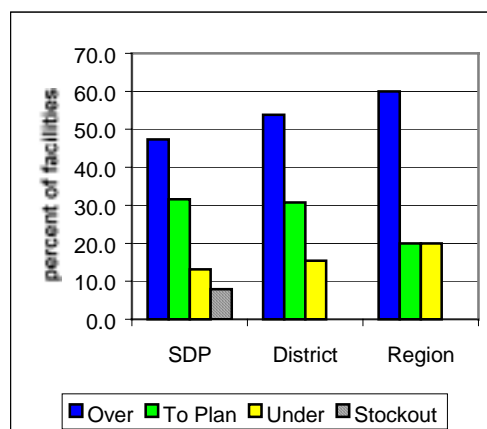


Figure 4.9
Stock Status: Ferrous Sulfate with Iron (tablets)



4.5. Organization and Human Resources

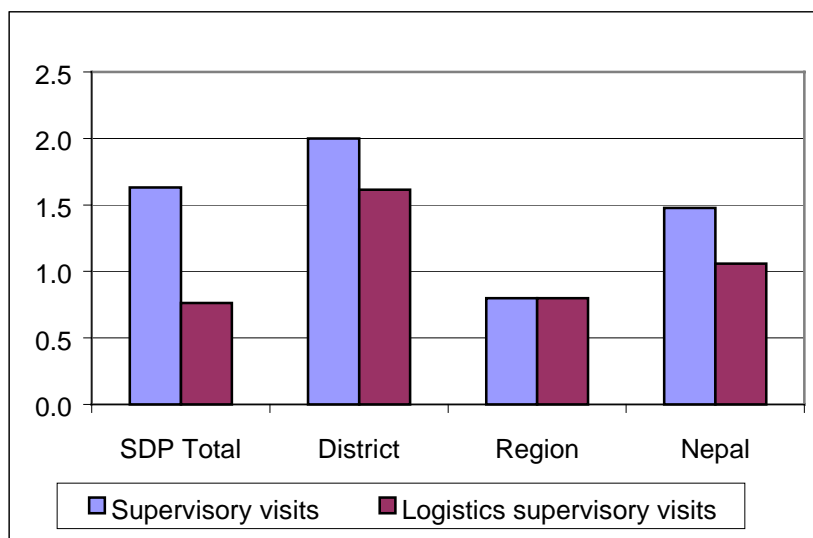
LMD was created to monitor the supply of health commodities throughout the country. Thirty-seven positions were created under LMD to implement this. The number of staff at the districts and SDPs seems to be sufficient to manage the logistics system. However, at LMD the team found excessive storekeepers and too few mid-level managers to run such a large, complex system. In addition, certain key positions were loaned to other departments, further exacerbating the human resources imbalance.

Effective supervision, undeniably a critical function in maintaining effective performance, takes place sporadically and, in some places, not at all. Where it does occur, emphasis has not been on improving

performance through OJT or other effective performance improvement interventions. Figure 4.10 shows the mean number of supervisory visits during the last six months for each level in the system.

Figure 4.10

*Mean Number of MOH Supervisory Visits in the Last Six Months
(July–December 1999)*



LMD suggests an annual plan for logistics management training with targets, managed and implemented by NHTC through its five RHTCs. This has been in place since 1997–1998, with technical assistance to develop training curricula and a cadre of trainers provided by FPLM. An adequate number of human resources exists at NHTC and the RHTCs to implement both basic and ICP training, with new trainers being trained in-house by NHTC, as required. RHTC trainers are knowledgeable about the health logistics system and use a competency-based model when conducting logistics training. A comprehensive training plan (table 4.3) has resulted in 2,891 personnel trained in logistics management during 1997/1998–1999/2000, a significant accomplishment in any country. NHTC leadership has long been committed to undertaking logistics training, and discussions with the present director indicate continued support and commitment.

Among respondents trained by RHTC in the last two years, 100 percent had knowledge of FEFO but not all were practicing it. All LMIS feedback report recipients knew how to use the information to make decisions but many were not doing so.

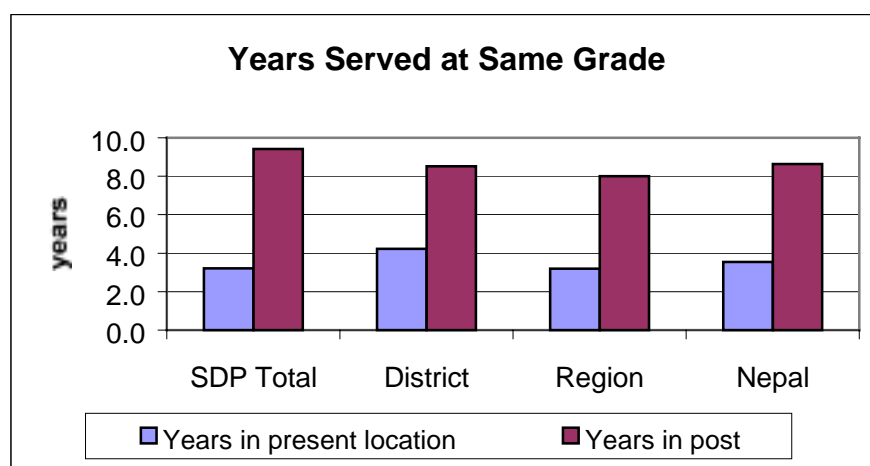
Table 4.2 Trained Personnel 1997–2000

Cadre Trained	1997/1998		1998/1999		1999/2000 (ongoing)		TOTAL
	NHTC	RHTC	NHTC	RHTC	NHTC	RHTC	
Regional TC	33	-	18	-	29	-	80
District Health Officer	104	-	-	-	-	-	104
District Storekeepers	-	-	-	46	-	15	61
HP, SHP, PHC	-	706	-	375	-	141	1,222
SDP Storekeeper & In-Charge	258	-	-	108	-	1,058	1,424
Total	395	706	18	529	29	1,214	2,891

NHTC and RHTC staff turnover does not seem to be a significant problem. The team was impressed with the strategies each RHTC used to develop an adequate number of personnel capable of conducting logistics training.

Staff turnover often impacts significantly on a logistics system. Personnel interviewed had been in the same job grade for an average (median) of eight years and in the same SDP for an average of 3.5 years (see figure 4.11). This relative stability speaks well for system performance. Effective supervision is the missing critical link that would help ensure personnel performance is maintained at an acceptable standard.

Figure 4.11
Years Served at the Same Grade



4.6. Policy and Adaptability

FPLM's experience in strengthening logistics systems in many countries provides evidence that involvement and support at the highest levels possible plays a significant role in a system's overall strength or weakness. The present human resource constraints within LMD provide an excellent example of how policy support and involvement are needed to strengthen components. On the surface, 37 staff to manage the health logistics system seems adequate; however, closer inspection shows that personnel have been seconded from key LMD positions to other departments, thus forcing those still at LMD to carry out multiple responsibilities. The return of these personnel to the LMD will require intervention by personnel at higher decision-making levels. Without such intervention, this imbalance will continue, impacting on the ability of the few LMD mid-level managers to manage all components of the logistics system. Other examples can be cited, but this points out the critical role policy plays in a well-functioning logistics system.

While discussions with many MOH personnel at the Central level clearly demonstrate their commitment to ensuring an effective and efficient logistics system, it was unclear if a policy-level advocate or champion for logistics exists at levels higher than Divisional Director. JSI/Nepal has identified MOH personnel with political longevity and influence. Its strategy to influence development of "logistics champions" has involved attendance at seminars, training courses on logistics management, and study tours to foreign countries. Continued efforts in this direction will help develop core HMG personnel at the highest levels who will advocate for logistics funding and further the cause of logistics. These policy-level champions must continually carry the banner of "no product, no program" throughout the corridors of government.

5.0 Findings

Results have been interpreted with a focus on the effectiveness, institutionalization, and sustainability of the logistics functions: LMIS, forecasting and procurement, warehousing and storage, distribution and inventory control, and organization and human resources. For this report, institutionalization is roughly defined as the ability of HMG personnel to implement supply chain functions with little or no technical assistance from the donor community, including the JSI bilateral project, which provides the majority of technical assistance to LMD. These functions are only sustainable if they are not dependent on donor funds to continue.

5.1. LMIS

The LMIS, vital in decision making, is in place and functioning at all levels. Development of skills to complete LMIS records and reports can be attributed largely to the logistics management training courses conducted by the RHTCs.

However, the LMIS unit has not been fully institutionalized within the LMD organogram (although the LMIS unit itself is physically located within LMD). Its continued funding was in question at the time of this assessment, a situation that threatens the compilation, analysis, and feedback of data throughout the system. In addition, no LMD staff are specifically tasked with supervision of district stores and health facility personnel. Existing staff are not able to adequately supervise personnel (with logistics tasks). Furthermore, LMIS unit-produced quarterly feedback reports are not used for decision making. Thus, decisions are often made long after the situation has corrected itself or there has been a stockout, resulting in poor client service.

The LMIS unit, its supervision, positions, and forms are funded externally by USAID, a situation that does not bode well for institutionalization or sustainability. Because the LMIS unit is not officially within LMD, it is difficult to forecast the likelihood of its success.

5.2. Forecasting and Procurement

The once-a-year delivery of contraceptives (ACPD) to district and regional levels and indent drugs to the regional level seems to be working well as long as procurement of all commodities is undertaken well in advance. Contraceptives seem to be well managed in this respect, as they are usually procured by donors from international sources. On the other hand, some consumables such as gauze and sticking plaster procured locally had not been delivered in time for regional drug distribution, holding up distribution of indent drugs and consumables to districts. RMSs said they waited for the remaining supplies to arrive to avoid the expense of two deliveries to the same districts.

Of the essential drugs tracked, pediatric cotrimoxazole (100/20mg) was the most problematic for districts to procure. Often it was not available either locally or in the region and the more expensive syrup formulation had to be procured. As with many other less developed countries, many drugs were procured according to budgetary constraints rather than need.

MOH personnel performed forecasting of contraceptives and drugs on a consensus basis; in this respect, the function was partly institutionalized. However, because technical assistance from JSI/Nepal for contraceptives and WHO for drugs is required for forecasting, sustainability is not achieved.

A substantial amount of the drugs and all contraceptives are funded by donor agencies, this is entirely unsustainable. However, MOH has the ability to procure any product.

5.3. Warehousing and Storage

Few logistics systems can boast ideal storage facilities at all levels but it is important to understand that inadequate storage facilities and poor conditions shorten product life and jeopardize product quality and integrity. The review team found that Nepal is no different from other countries in storage of contraceptives and drugs. According to JSI/Nepal, 57 of the 75 district stores are short of space, and 32 district stores rent private premises, often large houses not suited to drug and contraceptive storage. HP and SHP storage facilities tend to be more spacious and in better condition, but common practices such as stacking commodities against walls lead to insect and water damage. Store cleanliness is a countrywide problem. On the positive side, District and Regional stores are complying with the legal requirement to perform two inventories per year, FEFO generally seems to be followed and known in all facilities, and most stores attempt to follow storage guidelines.

Regarding institutionalization, all storage facilities are under direct government control, but its monitoring is infrequent and inconsistent and still largely undertaken by JSI. Proposals for use of government funds from the next World Bank loans for district stores building and/or renovation have not been formally agreed to as of March 2000. However, the present situation with regard to warehousing and storage is sustainable by the government.

5.4. Distribution and Inventory Control

The overall distribution system seems to be working well for the majority of the more populated parts of the country. There is some lack of transport between the HP and District level and, because of the terrain, different transportation systems accommodate different regions. A quote from an interviewee, “We have one horse but it is not functioning!”

There is a problem with daily allowance (TA/DA) for collection of commodities by health personnel. Although the Central government stated these rates had been raised, it was obvious this information had not filtered to health workers at HP and SHP levels. In addition, it was not clear what happened to the promised World Bank Program Implementation Unit financing for transport expenses (vehicle maintenance and petrol). While District levels complain of inadequate money for transport, maintenance and fuel, Central level maintains it is available.

Despite these problems, distribution is good. Each level is stocked adequately and minimal stockouts have been experienced during 1999. Many facilities have been disposing of expired or damaged commodities on site rather than sending them up the system. JSI continues to assist with distribution by carrying commodities while on routine monitoring visits, an advantage of having access to vehicles. On the whole, distribution and inventory control is institutionalized and sustainable with the MOH.

5.5. Organization and Human Resources

Ongoing training courses implemented by NHTC and its five RHTCs continue to supply well-trained staff for the logistics functions. Training is sustained because USAID and UNFPA continue to support the RHTCs; if funding ceased, logistics training would be threatened. District, HP, and SHP all knew FEFO, how to complete LMIS forms, and about LMIS feedback reports (at District level). The system was weak in monitoring and supervision, but procedures manuals (providing personnel with information on how to complete logistics tasks in lieu of physical supervision) given during training were available in most

facilities. Facilities at the four RHTCs visited were not ideal, but training staff and administrators, committed to logistics training, made the best of less-than-ideal conditions. RHTCs visited had equipment, such as photocopy machines, overhead projectors, and computers, but at every facility, some were out of service, and training staff did not have computer skills. RHTC training staff did not receive adequate supervision from NHTC and did not themselves provide follow-up and monitoring of their trainees.

6.0 Lessons Learned

This review offered several lessons for future JSI/FPLM logistics technical assistance.

1. **Cultural and political barriers to an efficient supply chain system may be too strong for training alone to be effective without also focusing on changing behaviors through better monitoring and supervision.**

This must be stated and restated when attempting to change behaviors directly affecting the supply chain. Barriers are largely cultural and political, and encompass a range of attitudes, behaviors, and nuances. For example, there is a lack of supervisory mentality where subordinates do not receive constructive supervision. This is complicated by the rigid hierarchical system. Coaching and training in supervision techniques or on-the-job training methods can be applied but the wider cultural context often impedes successful implementation.

2. **Appropriate reward structures for personnel influence the supply chain system.**

Incentives and disincentives significantly influence individuals and, thus, overall organizational performance. Lack of incentives, such as rewards/recognition, praise and adequate salaries, and disincentives for poor performance create a general lack of interest in doing a good job. This is not to say that many health workers don't do a good job; many were caring excellent workers. The supply chain would improve if workers were rewarded for a job well done and punished for poor performance.

3. **System institutionalization depends on it being “owned” by the government.**

In most cases, technical assistance by JSI/Nepal and FPLM have effected positive changes to the logistics system, improvement of the supply chain, and raising awareness of the importance of logistics in the health system for essential drug and contraceptive commodities. Problems occur when the host government is not convinced of the importance of logistics or unable to devote the resources to certain of its functions. This occurs in many parts of the world but is exemplified in Nepal.

One example is JSI/Nepal. FPLM sees the continuance of the LMIS unit within LMD as paramount in running LMIS, a view not completely shared by LMD or MOH. The LMIS unit is still not formally part of MOH, which points to constraints such as a hiring moratorium. The fact remains that two senior posts within LMD are on loan to other MOH divisions.

Another example is the use of JSI vehicles to occasionally transport commodities if a visit is for supervision and monitoring purposes. JSI is often asked to take supplies. This action affects the extent of institutionalization.

4. **Influencing sustainability is usually out of the control of technical assistance providers.**

It is apparent that despite words of encouragement about sustainability, sustainability is very difficult to attain in some settings. It seems likely that some countries will never be in a position to sustain particular activities. Training functions of NHTC and the RHTCs are 90 percent funded by outside sources (World Bank and USAID). The World Bank credits used for this could be regarded as government resources, as they are loans. It was virtually impossible to obtain an answer from

training center staff as to whether logistics training would be discontinued if funding ceased. It is obvious that donors wanting training can have it *if* they pay for it.

Another example is MASS's role in tidying and reorganizing district stores according to the standards on FPLM's yellow poster. On one hand, this results in well-organized, clean stores, FEFO in order, good records, and briefed staff. On the other hand, district storekeepers have no incentive to maintain stores themselves because they assume that MASS will redo it when it gets bad! This cynical view is nonetheless a factor in sustainability. If MOH paid a private company to maintain the stores, that would be considered *outsourcing*; the present arrangement is really *resourcing*.

5. Monitoring and supervision are key factors in improving system performance.

Throughout the review, lack of supervision accounted for poor performance at SDPs. Those stores, HPs and SHPs, that received adequate or frequent supervision consistently performed better than those receiving fewer or none.

The problem of daily allowance for collection and distribution of commodities probably affects frequency of supervision. Staff will not travel and supervise subordinates if they do not receive reasonable compensation for costs incurred. Furthermore, if transportation is difficult to obtain, particularly private transport, it is less likely monitoring and supervision will occur.

A large difference between what JSI versus district or regional health workers could accomplish is the presence of a four-wheel drive vehicle able to go almost anywhere at any time, with enough fuel, and a paid, professional driver. Compare this with the government employee who must use public transport, does not get adequate expense reimbursement, and must spend nights away from home.

Adequate resources must be available to continue monitoring and supervision of trained personnel rather than relying on training itself. Appropriate supervision can include on-the-job training, the confirming of role and job description of the staff being supervised, and basic checking on that part of the system.

7.0 Recommendations

LMD or JSI should implement either recommendations listed under the respective logistics headings. Following them are recommendations that deal with institutionalization, sustainability, and overall performance improvement also directed mainly at LMD and JSI. Last, there are recommendations directed at the donor community.

7.1. Recommendations for Each Logistics Area

7.1.1 LMIS

Place greater emphasis on the roles of the DHO and district storekeepers logistics functions, especially monitoring and supervision. This requires attitudinal changes towards monitoring and decision making by supervisory staff.

Recommendation: Train DHOs and district storekeepers to make timely use of HP and SHP quarterly LMIS reports for monitoring and decision making before forwarding them to the Central level.

Recommendation: Train supervisors to check accuracy of LMIS balance reported against stockbook issues.

At the Central level, the LMIS is threatened because of the informal nature of the LMIS unit, its staffing, and funding. If investment in the system is to be saved, serious decisions must be made soon. One is the return of the two LMD senior positions loaned elsewhere in the MOH.

Recommendation: The LMIS unit must be firmly established within the MOH/LMD and allocated funding to provide at least—

1. One senior position to supervise the LMIS
2. Two full-time data entry personnel to operate the unit
3. Printing of LMIS forms and reports

7.1.2 Forecasting and Procurement

Forecasting has been adequate. For contraceptives, short-term needs are addressed through 2001. For 2002–2004, there is a shortfall of commodities of \$7.5 million. WHO is due to make a large-scale assessment of drug need in mid-2000. The MOH and donors can use the resulting figures to make necessary procurements.

Recommendation: MOH/LMD and JSI must work together to secure commitments from donors or HMG for contraceptives required for 2000 through 2004. UNFPA should assume this responsibility to ensure donor coordination.

7.1.3 Warehousing and Storage

A number of minor issues, which must be addressed, are linked to supervision and monitoring. These are relatively easy to implement on paper but difficult realistically because of cultural attitudes towards monitoring and supervision.

Recommendation: Clarify store personnel roles and responsibilities. Consider drafting job descriptions to encompass all functions.

Recommendation: Encourage district stores to carry out physical inventories once per quarter and enter results into the stockbook.

Recommendation: Increase supervision to reinforce relationships between FEFO, product cost, and customer service and to ensure product quality through correct adherence to storage guidelines. Supervision must be viewed as a means to improve the system, not as staff criticism.

The need for adequate storage space at the district level is obvious. The LMD/JSI report of September 1999 detailed the shortfall. As moves to decentralize the Nepal health logistics system increase, adequate, quality storage space at every district becomes more critical.

Recommendation: Intensify MOH efforts to locate donors to construct appropriate district storerooms. The model proposed in the LMD/JSI report should be the basis for any construction, and attempts to alter or scale-up the design should be avoided.

7.1.4 Distribution and Inventory Control

Distribution and inventory control seem to be working well despite transport and access problems in some parts. There are plans for expansion of ICP to other districts in other regions even though there was little difference between actual inventory levels of ICP and non-ICP facilities.

Recommendation: Continue to use LMIS data to determine ACDP issue quantity for contraceptives and essential drugs.

Recommendation: JSI must develop district-level capacity to solve transport problems while continuing to transport commodities in emergencies.

One concern was expired products (low for contraceptives, higher for drugs) and their disposal. Many facilities disposed commodities at the SDP without regard to the standard procedures, thus the true extent of the problem went unrecorded and unknown. Disposal of drugs according to safety procedures were not always followed.

Recommendation: District-level supervisors to facilitate appropriate disposal of unusable commodities twice a year.

Some of the HP and SHP problems regarded transport availability, cost, and staff allowances. This seems to be a supervision problem; lower staff do not know about the increased daily allowances and the World Bank-funded transportation support.

Recommendation: Encourage LMD to monitor the use of dedicated transport funds at the district level, and monitor daily allowances at the district level and below.

7.1.5 Organization and Human Resources

Training has worked very well with impressive results for completion and sending LMIS quarterly reports, and the ability to calculate future commodity requirements. However, improvements could be made through better supervision and monitoring procedures by special personnel rather than expecting the DHO to do it all.

Recommendation: Strengthen OJT and supervision through use of the logistics checklist and procedures manuals. Create a dedicated cadre of District level logistics personnel.

In the absence of this cadre, the DHO or district storekeeper must be trained to use logistics information for decision making and encouraged to make adequate supervision visits to various district facilities.

Recommendation: Until a cadre of logistics supervisors can be created, provide the DHO, DPHO, or district storekeeper resources and skills to make adequate supervisory visits.

At the Central and Regional levels, ensure that the training courses are well institutionalized, working well, and providing the knowledge required for an efficient logistics system. The dependence on donor funding affecting continuation of NHTC and RHTC's training must be addressed.

Recommendation: Provide RHTCs with an adequate ongoing budget for maintenance and repair of essential equipment to carry out required training courses.

Continue the high quality of RHTC courses and evaluate their effectiveness. In the meantime, monitor the courses.

Recommendation: Encourage NHTC and LMD to monitor the quality of RHTC logistics training.

7.1.6 Policy and Adaptability

Logistics has not yet achieved the status it deserves from MOH or HMG. Lobbying of influential people must be done, and the importance of logistics must be placed on the general health agenda at every opportunity.

Recommendation: JSI with LMD must continue to identify and nurture logistics champions within HMG.

The logistics champion can popularize the numerous program benefits of improving logistics. The champion must know how to get the attention of policymakers and how to ensure policy support for a dependable commodity supply for all clients.

7.2. General Recommendations

7.2.1 Institutionalization

The distinction between institutionalization and sustainability has been emphasized to clarify that, although HMG is able to perform the functions required in many areas, it often does not because of resources (human or monetary) or time. With little hope for sustainability, it is very important to work towards institutionalization. This is certainly the case for training and human resource development at the

district level and below. More must be done for other logistics functions, particularly strengthening supervision and monitoring.

Recommendation: JSI must transfer skills to HMG counterparts during the next two years.

Recommendation: JSI must decrease involvement in the direct implementation of logistics activities (e.g., LMIS unit supervision and commodities distribution) and continue technical assistance and skill transfer.

7.2.2 Sustainability

A number of conditions must be met and a variety of reallocations of personnel, resources, and priorities must be made. In particular, increase LMD personnel if the same level of logistics functions are to be covered. A fundamental problem is the difference between LMD's and JSI's definition of logistics functions, effecting monitoring and supervision, and LMIS. While LMD is primarily concerned with the contents of the LSIP, JSI has a much wider scope of activities.

Recommendation: Reallocate LMD resources to give adequate attention to all major logistics activities (e.g., LMIS, training, monitoring, policy/donor coordination, distribution and warehousing, procurement, forecasting).

Recommendation: Reallocate human resources for a separate supervisory position for key LMD activities.

7.2.3 Supervision, Monitoring, and Performance Improvement

Monitoring and supervision are of utmost importance for an efficient logistics systems.

Recommendation: Encourage HMG to use more effective mechanisms for monitoring and supervision at all levels. Appropriate mechanisms include—

1. Identifying appropriate supervision.
2. Ensuring supervisors can move freely and independently.
3. Ensuring supervisors can influence the performance of the staff they supervise.
4. Enabling frequent monitoring and supervision.
5. Providing non-monetary incentives for supervisors and the staff they supervise.

It is important that changes in system performance, personnel, and LMD be assessed. Other program directors must be more involved with LMD than they have so far.

Recommendation: Develop appropriate indicators to assess all levels of the logistics system to be used by and on LMD to measure progress.

7.2.4 Donor Recommendations

Nepal is very dependent on donors to provide contraceptives and drugs; printing of forms; building of stores; dejunking of health facilities. Donor reliance is a large problem because there is a tendency for

HMG to expect that donors will always help out. HMG must make changes to its allocation of funds for various functions. Donors expect HMG to show willingness to take on increased responsibility for various health functions, including logistics.

Recommendation: Tie donor funding to financial or other HMG commitments in logistics.

Recommendation: Phase out donor funding for logistics only after assessments of sustainability are undertaken.

Recommendation: Continue donor funding for logistics in the interim for at least five years in—

1. LMIS unit
2. Improving/constructing storage facilities
3. Transportation
4. Monitoring and supervision
5. Maintenance of RHTC infrastructure
6. Logistics management training
7. Development of monitoring and evaluation indicators

Donor health and family planning programs in Nepal are dependent on the supply of commodities. The highly acclaimed vitamin A program is dependent on putting vitamin A capsules in the hands of more than 50,000 FCHVs. This requires logistics. Family planning camps require kits and quality medical supplies. This means logistics. The ARI program requires cotrimoxazole—this means more logistics. For these reasons, and because logistics is an essential part of the system, donors are advised to look closely at the impact of any reduction in support to the HMG logistics system on the health programs they fund before withdrawing funding for logistics.

Appendix A.

List of Instruments

- A-1: Central and Regional Quantitative Questionnaire
- A-2: District and SDP Questionnaire
- A-3: National Health Training Centre Questionnaire
- A-4: Regional Health Training Centres Questionnaire
- A-5: Key Informant qualitative question guide

A-1: Central and Regional Quantitative Questionnaire

NEPAL ASSESSMENT OF THE MINISTRY OF HEALTH COMMODITIES LOGISTICS SYSTEM	
<i>CENTRAL STORE/REGIONAL STORES</i>	
<p>Date of the Interview</p> <p>Interviewer</p> <p>Region/Central</p> <p>Name of the establishment</p> <p>Name of the person interviewed</p> <p>Job Title</p> <p>Length of time in current location and position years.....months.....</p> <p>Length of time in positionyears.....months.....</p> <p>Have you been trained in stores management?</p> <p>Yes (.....) No (.....)</p>	<p>Code</p>

1. Who supervises you?	
2. Have you received any supervisory visits from the central level in the past six months? Yes (.....) How Many? Who? When? No (.....) GO TO QUESTION 4	
3. If YES – did any of these supervisory visits include stores management ? Yes (.....) How Many? Who? When? No (.....)	
4. What advice have you received to improve your store?	
5. Who gave you this advice? .	
6. List all the types of stores management records/reports do you keep at this facility? Stockbook (Jinsikhata) Receiving forms (Dakhila) Request form (MAG) Handover form (Hasantaran) LMIS form Order Worksheet Purchasing Order (Karidadas) AG No. 49 AG No. 57 Other	
7. How do you determine the quantity you send down to the next level (IF APPLICABLE).	
8. When do you update the stockbook (Jinsikhata)?	
9. When do you conduct a physical inventory for the commodities?	
ASK FOR THE LMIS REPORTS FOR THE LAST TWO QUARTERS, THE AG 49 FORM, AND THE JINSIKHATA, THEN PROCEED WITH FOLLOWING QUESTIONS	

Nepal: Contraceptive and Drugs Logistics System

<p>10. (ONLY FOR DISTRICT LEVEL) Are the physical inventory findings recorded on form 49?</p> <p>Yes (....) No (.....)</p>	
<p>11. What do you do when there is a difference between the physical count and the figures recorded in the stockbook (Jinsikhata) ?</p>	
<p>12. Stock Status Data Tables</p> <p>Note to interviewers : With the stock books and other reports complete tables 12A, 12B and 12C for amount dispensed, stockouts, expired stock. Complete as much as possible from the records BEFORE moving to the store to count the stock</p>	

12A. Enter Stock level data from records and then conduct a physical inventory (total consumption for last six months to be taken from records (July 17 to January 14, 2000))

Commodity	A Expiry Date/s	B Physical Count on day of visit	C Stockbook Balance & date of entry	D Issues in last 6 months	E Average Monthly Consumption	F Months of stock on Hand	G Comments
Condoms (pieces)							
Depo-Provera® (vials)							
Pills (cycles)							
Co-Trimoxazole 100/20mg tabs							
Vitamin A 200000 IU caps							
ORS packets (1000 ml packets)							
Ferrous Sulfate (60mg tab)							

12B. Complete the Stock out survey of commodities from the *Jinsikhata* during the last six months (July 16 to January 15, 2000).

Commodity	A Start Date for Stock out (in last 6 months)	B End date for Stock out (in last 6months)	C Duration of stock out in weeks	D S/O now (Y/N)	E Other comments	F Respondent Information for stockout
Condoms (pieces)						
Depo-Provera® (vials)						
Pills (cycles)						
Co-Trimoxazole 100/20mg tabs						
Vitamin A 200000 IU caps						
ORS packets (1000 ml packets)						
Ferrous Sulfate (60mg tab)						

12C. Complete the survey of expired and or damaged commodities during the last six months (July 16 to January 15 2000).

Commodity	A Total wasted	B Total issued	C Wastage rate [A/B*100]	D Reason for wastage
Condoms (pieces)				
Depo-Provera® (vials)				
Pills (cycles)				
Co-Trimoxazole 100/20mg tabs				
Vitamin A 200000 IU caps				
ORS packets (1000 ml packets)				
Ferrous Sulfate (60mg tab)				

13. Describe how you would dispose of unusable items?	
14. Describe the current storage area where the commodities are stored. (does it have stacking racks?, shelving, picking space, what is the condition of the store? Are there separate stores for different products?)	

Nepal: Contraceptive and Drugs Logistics System

15. Storage Checklist – Place a checkmark in the appropriate column according to visual inspection of the storage facility	
--	--

No	Description	NA	Yes	No
1	Storeroom is clean and maintained in good condition.			
2	The roof is in good condition to avoid water penetration.			
3	The storeroom is dry and does not suffer from damp conditions.			
4	The storeroom is well lit.			
5	The storeroom is well ventilated.			
6	The storeroom is regularly disinfected and sprayed to kill insects.			
7	Products are stored out of direct sunlight.			
8	Condoms/Pills are stored away from electric motors and fluorescent lights.			
9	Commodities are stacked off the floor.			
10	Commodities are stacked away from the walls & other stacks.			
11	Stacks are no more than 2.5 meters (8 feet) high.			
12	Products are stored in a manner accessible for First-Expiry / First-Out (FEFO)			
13	Cartons are arranged so labels, expiry dates, manufacturing dates are visible.			
14	Fire safety equipment is available and accessible.			
15	Storage is accessible at any time within normal work hours.			
16	Damaged and/or expired commodities are separated from good products.			
17	Commodities are stored separately away from insecticides and chemicals.			
18	Commodities are stored according to the LMIS form.			
Total Number of Check marks				

16. What problems do you have related to contraceptive or drug commodities?	
17. What ideas do you have to improve stores management and the health logistics system?	

Thank you for your participation

A-2: District and SDP Questionnaire

NEPAL ASSESSMENT OF THE MINISTRY OF HEALTH COMMODITIES LOGISTICS SYSTEM	
<i>DISTRICT AND SERVICE DELIVERY POINT LEVELS</i>	
	Code
Date of the Interview	
Interviewer	
District Health Office ____	
Health Post ____	
Sub Health Post ____	
Primary Health Centre ____	
Region/District	
Name of the establishment	
Name of the person interviewed	
Job Title	
Length of time in current location and position years.....months.....	
Length of time in positionyears.....months.....	
Have you been trained in stores management?	
Yes (.....) No (.....)	
If YES was it: a) more than two years ago ____	
b) less than two years (RHTC) ____	
IF YES THEN ADMINISTER THE TRAINING QUESTIONNAIRE AFTER YOU COMPLETE THIS QUESTIONNAIRE	

Nepal: Contraceptive and Drugs Logistics System

1. Who supervises you?	
<p>2. Have you received any supervisory visits from the level above in the past six months?</p> <p>Yes (.....) How Many? Who? When?</p> <p>No (.....) GO TO QUESTION 4</p>	
<p>3. If YES – did any of these supervisory visits include stores management ?</p> <p>Yes (.....) How Many? Who? When?</p> <p>No (.....)</p>	
4. What advice have you received to improve your store?	
5. Who gave you this advice?	
<p>6. From where do you receive your drug supplies?</p> <ul style="list-style-type: none"> • Health Post 1 • District Store 2 • Regional medical Store 3 • Central Warehouse 4 • Buy from Pharmacy 5 • Other...(describe) 6..... 	
<p>7. How often do you receive your drug supplies from the level above?</p> <ul style="list-style-type: none"> • Monthly 1 • Quarterly 2 • Six-monthly 3 • Annually 4 • Other 5 	
8. By what method of transport do you receive the drugs?	
9. What forms do you complete to receive your drug supply?	

<p>10. From where do you receive your contraceptive supplies?</p> <ul style="list-style-type: none"> • Health Post 1 • District Store 2 • Regional medical Store 3 • Central Warehouse 4 • Other 5 	
<p>11. How often do you receive your contraceptive supplies from the level above</p> <ul style="list-style-type: none"> • Monthly 1 • Quarterly 2 • Six-monthly 3 • Annually 4 • As required 5 • Other 6 	
<p>12. By what method of transport do you receive the contraceptives?</p>	
<p>13. What forms do you complete to receive your contraceptive supply?</p>	
<p>14. List all the types of stores management records/reports do you keep at this facility?</p> <ol style="list-style-type: none"> 1. Stockbook (Jinsikhata) 2. Receiving forms (Dakhila) 3. Request form (MAG) 4. Handover form (Hastantaran) 5. LMIS form 6. Order Worksheet 7. Purchasing Order (Karidadas) 8. AG No. 49 9. AG No. 57 10. Other 	
<p>15. Who decides the quantities of the commodities you receive?</p>	
<p>16. How is this quantity determined ? (Calculations using what base?)</p>	

Nepal: Contraceptive and Drugs Logistics System

17. How do you determine the quantity you send down to the next level (IF APPLICABLE). District to SDP _____ SDP to FCHV/MCHW/VHW _____ HP to SHP _____	
18. When do you update the stockbook (Jinsikhata)?	
19. When do send the LMIS form?	
20. When do you conduct a physical inventory for the commodities?	
ASK FOR THE LMIS REPORTS FOR THE LAST TWO QUARTERS, THE AG 49 FORM, AND THE JINSIKHATA, THEN PROCEED WITH FOLLOWING QUESTIONS	
21. (ONLY FOR DISTRICT LEVEL) Are the physical inventory findings recorded on form 49? Yes (....) No (.....)	
22. What do you do when there is a difference between the physical count and the figures recorded in the stockbook (Jinsikhata)?	
23. Stock Status Data Tables Note to interviewers : With the stock books and other reports complete tables 23A, 23B and 23C for amount dispensed, stockouts, expired stock. Complete as much as possible from the records BEFORE moving to the store to count the stock	

23A. Enter Stock level data from records and then conduct a physical inventory (total consumption for last six months to be taken from records (July 16 to January 16, 2000))

Commodity	A Expiry Date/s	B Physical Count on day of visit	C Stockbook Balance & date of entry	D Issues in last 6 months	E Average Monthly Consumption	F Months of stock on Hand	G Stocked according to plan (ICP only)
Condoms (pieces)							
Depo-Provera® (vials)							
Pills (cycles)							
Co-Trimoxazole 100/20mg tabs							
Vitamin A 200000 IU caps							
ORS packets (1000 ml packets)							
Ferrous Sulfate (60mg tab)							

23B. Complete the Stock out survey of commodities from the *Jinsikhata* during the last six months (July 16 to January 15, 2000).

Commodity	A Start Date for Stock out (in last six months)	B End date for Stock out (in last six months)	C Duration of stock out in weeks	D S/O now (Y/N)	E Stock is in dispensary? (Y/N)	F Respondent Information Reason for stockout)
Condoms (pieces)						
Depo-Provera® (vials)						
Pills (cycles)						
Co-Trimoxazole 100/20mg tabs						
Vitamin A 200000 IU caps						
ORS packets (1000 ml packets)						
Ferrous Sulfate (60mg tab)						

Nepal: Contraceptive and Drugs Logistics System

23C. Complete the survey of expired and or damaged commodities during the last six months (July 16 to January 15 2000).

Commodity	Total # product wasted	Total of product issued (dispensed)	Wastage rate (Total wasted/total dispensed) [A/B*100]	Reason for wastage
	A Unusable	B total	D percentage	E text
Condoms (pieces)				
Depo-Provera® (vials)				
Pills (cycles)				
Co-Trimoxazole 120/20mg tabs				
Vitamin A 200000 IU caps				
ORS packets (1000 ml packets)				
Ferrous Sulfate/Folic Acid (60+0.5mg tab)				

24. Describe how you would dispose of unusable items?	
25. Describe the current storage area where the commodities are stored. (does it have stacking racks?, shelving, picking space, what is the condition of the store? Are there separate stores for different products?)	
26. Storage Checklist – Place a checkmark in the appropriate column according to visual inspection of the storage facility.	

No	Description	N/A	Yes	No
1	Storeroom is clean and maintained in good condition.			
2	The roof is in good condition to avoid water penetration.			
3	The storeroom is dry and does not suffer from damp conditions.			
4	The storeroom is well lit.			
5	The storeroom is well ventilated.			
6	The storeroom is regularly disinfected and sprayed to kill insects.			
7	Products are stored out of direct sunlight.			
8	Condoms/Pills are stored away from electric motors and fluorescent lights.			
9	Commodities are stacked off the floor.			
10	Commodities are stacked away from the walls & other stacks.			
11	Stacks are no more than 2.5 meters (8 feet) high.			
12	Products are stored in a manner accessible for First-Expiry / First-Out (FEFO)			
13	Cartons are arranged so that labels, expiry dates, manufacturing dates are visible.			
14	Fire safety equipment is available and accessible.			
15	Storage is accessible at any time within normal work hours.			
16	Damaged and/or expired commodities are separated from good products.			
17	Commodities are stored separately away from insecticides and chemicals.			
18	Commodities are stored according to the LMIS form.			
Total Number of Check marks				

27.	What problems do you have related to contraceptive or drug commodities?	
28.	What ideas do you have to improve stores management and the health logistics system?	

Thank you for your helpful participation

A-3: National Health Training Centre Questionnaire

LESSONS LEARNED EVALUATION – NEPAL

DATE OF INTERVIEW: _____

PRIMARY INTERVIEWER: _____

OTHER INTERVIEWERS: _____

FACILITY: National Health Training Center, Kathmandu

NAME/TITLE OF PERSON/S INTERVIEWED:

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SECTION 1: DATA COLLECTED THROUGH INTERVIEWS

- A. Human Resources for Logistics Training
- B. Budgets for Training
- C. Continuous Performance Improvement, Monitoring and Evaluation

SECTION 2: DATA COLLECTED THROUGH DOCUMENTATION

- A. Numbers of MOH Personnel Trained in Logistics Management Skills
- B. Number of NHTC Personnel (Headquarters) Trained in Logistics Management Training Skills
- C. Printed Materials for Training
- D. Budgets for Training
- E. Workplans for Logistics Training

SECTION 3: DATA COLLECTED THROUGH ON-SITE OBSERVATION

- A. Training Infrastructure

QUESTIONNAIRE
NATIONAL HEALTH TRAINING CENTER, KATHMANDU

SECTION 1: DATA COLLECTED THROUGH INTERVIEWS

A. HUMAN RESOURCES FOR LOGISTICS TRAINING

NOTE: Interviewer should not record data that is applicable to the RHTCs.

1. What is NHTC's official mandate?

2. What types of training courses does NHTC conduct?

3. What cadres of MOH personnel receive training through NHTC? *(This includes ALL personnel, not only those receiving logistics training.)*
 - a. At central level:
 - b. At regional level:
 - c. At district level:
 - d. At service delivery level:

4. Total number NHTC teaching faculty at NHTC headquarters (at time of interview):
 - Full-time _____
 - Part-time _____

5. Total number NHTC teaching staff (at headquarters) directly involved in logistics training:
 - Full-time _____
 - Part-time _____

6. Do written job descriptions exist for teaching faculty?

Yes ____
No ____

7. How many teaching faculty have left their positions within NHTC **in the past two years?**
 - a. Of this number, how many were transferred to other teaching positions within NHTC?
(NOTE: This could include being transferred to a teaching position in a RHTC or a teaching position at the district-level.)
 - b. Of this number, how many were transferred to non-teaching positions within NHTC/MOH?
 - c. What non-teaching positions were these people transferred to?
 - d. How many teaching faculty retired during this period?
 - e. How many NEW teaching faculty were hired within the past two years?
8. When teaching faculty involved in logistics leave the position for any reasons, how does NHTC prepare new teaching faculty to conduct logistics training? *(NOTE: Does a system exist for ensuring that newly recruited teaching faculty are brought up to speed?)*
9. Does NHTC conduct courses on its premises in Kathmandu?

Yes ____ No ____

If “yes”, describe the types of courses offered:
10. Describe the relationship between NHTC and the RHTCs:
 - a. What is NHTC’s role in developing teaching materials/curricula for the RHTCs?
 - b. What is NHTC’s role in scheduling each RHTC’s annual training schedule?
 - c. What is NHTC’s role specifically in scheduling logistics training at the RHTCs?
11. How did teaching faculty involved in logistics training gain their technical knowledge of logistics and of the Nepal health logistics system?
 - a. Received logistics TOT from JSI/N and LMD _____
 - b. In-house TOT on logistics conducted by NHTC for teaching faculty _____
 - c. Other (describe): _____

12. Does NHTC develop and implement refresher training for MOH personnel (not NHTC teaching staff)?

Yes ____ No ____

If “yes”, describe the process used to develop refresher training (*NOTE: Does NHTC identify the specific knowledge/skill gaps which indicate that refresher training is required?; How does NHTC consider refresher training different from basic training?*):

13. Does NHTC conduct refresher training for NHTC and RHTC teaching staff?

Yes ____ No ____

If “yes”, describe the process used to identify the need for refresher training.

B. BUDGETS FOR TRAINING

1. Does a budget for logistics training through RHTCs exist?

Yes ____ No ____

2. If yes, who develops this budget?

____ MOH (i.e., Finance Unit)
 ____ NHTC
 ____ NHTC in collaboration with RHTCs
 ____ RHTC
 ____ Other (list): _____

3. Who approves this budget?

____ MOH (i.e., Finance Unit)
 ____ NHTC
 ____ NHTC in collaboration with RHTCs
 ____ RHTC
 ____ Other (list): _____

C. CONTINUOUS PERFORMANCE IMPROVEMENT, MONITORING AND EVALUATION (i.e., supervision; on-the-job training)

1. Does NHTC follow up and monitor the performance of trainees on the job?

Yes ____ No ____

- a. If “yes”, does a monitoring/evaluation plan exist?

Yes ____ No ____

- b. If “yes”, describe how this follow-up/monitoring takes place (*i.e., do NHTC faculty provide this follow-up/monitoring?; what takes place during such a follow-up visit?; etc.*):

- c. How frequently does this follow-up/monitoring take place?

- d. Is there a specific position within NHTC that is responsible for follow-up/monitoring of trainees?

Yes ____ No ____

If “yes”, proceed with following questions

1. What is this person’s position/title?

:

2. Describe this person’s responsibilities:

- e. Does a separate M/E budget exist for monitoring and evaluation visits?

Yes ____ No ____

- f. Does a separate budget exist for monitoring and evaluating personnel who have received logistics training?

Yes ____ No ____

- g. If NHTC is not mandated to provide ongoing monitoring and evaluation of trainees, where does this responsibility lie in the MOH?

- h. Who supervises the teaching faculty at RHTCs?
- i. In what specific areas do they supervise teaching faculty?
- j. How does NHTC monitor/supervise the quality of RHTC teaching faculty's skills in logistics training?

**SECTION 2: DATA COLLECTED THROUGH
DOCUMENT REVIEW**

NOTE: Interviewer should request the following documents for review:

1. Numbers of MOH personnel trained by NHTC and RHTCs since 1997.
2. Copies of all training materials used by NHTC/RHTCs to conduct logistics training, including:
 - a. Trainer's Guides
 - b. Trainee materials such as handouts and procedures manuals
3. Annual Work Plan for implementing logistics training through RHTCs.
4. Budgets showing line item expenditures (proposed and actual) for logistics training.
5. Trainer/teaching faculty job descriptions.

A. NUMBERS OF MOH PERSONNEL TRAINED IN LOGISTICS MANAGEMENT SKILLS:

Total number personnel trained by NHTC and all RHTCs in logistics:

CADRE TRAINED	1997		1998		1999	
	NHTC	RHTC	NHTC	RHTC	NHTC	RHTC
District Health Officer						
Storekeepers (mukhtias)						
Health post & sub-health post						
Other:						

(NOTE: May need to use Nepali calendar)

B. NUMBER NHTC PERSONNEL (HEADQUARTERS) TRAINED IN LOGISTICS MANAGEMENT TRAINING SKILLS:

CADRE TRAINED	1997	1998	1999
NHTC Personnel			

C. PRINTED TRAINING MATERIALS

1. Do Trainer's Guides exist for logistics training?

Yes ____ No ____

2. If yes, list the titles of the materials:

3. Do materials such as Procedures Manuals and/or handouts exist for trainees?

Yes ____ No ____

4. If yes, list the materials:

5. Do these materials use competency-based techniques?

All ____ Some ____ None ____

D. BUDGET FOR TRAINING

1. Of the total amount allocated for logistics training, what was the actual amount spent:

YEAR	AMOUNT ALLOCATED	ACTUAL AMOUNT SPENT
1997	Rs.	Rs.
1998	Rs.	Rs.
1999	Rs.	Rs.

(NOTE: May need to use Nepali calendar)

Nepal: Contraceptive and Drugs Logistics System

2. Percentage of budget from MOH and external funding sources:

BUDGET COSTS	% OF MOH BUDGET	% OF EXTERNAL FUNDING SOURCE	SOURCE OF EXTERNAL FUNDING
Teaching faculty salaries			
Trainee travel expenses			
Trainee per diems			
Trainee materials			
Trainee meals/snacks			
Travel/per diem for supervisory visits			
Other:			

E. WORK PLANS FOR LOGISTICS TRAINING

1. Number logistics courses scheduled per year (1999):

Eastern Region RTC: _____
Central Region RTC: _____
Western Region RTC: _____
Mid-Western Region RTC: _____
Far Western Region RTC: _____

2. Of this number how many logistics courses were actually conducted?

Eastern Region RTC: _____
Central Region RTC: _____
Western Region RTC: _____
Mid-Western Region RTC: _____
Far Western Region RTC: _____

3. For those courses scheduled but not conducted, what were the reasons?

Eastern Region RTC: _____
Central Region RTC: _____
Western Region RTC: _____
Mid-Western Region RTC: _____
Far Western Region RTC: _____

SECTION 3: DATA COLLECTION THROUGH OBSERVATION
TRAINING INFRASTRUCTURE

Describe the facilities available for conducting training within NHTC:

1. Total number classrooms available for training: _____
2. Audio-visual equipment:
 Total Number: _____
 Total number in working condition: _____
3. Photo-copy machines:
 Total number: _____
 Total number in working condition: _____
4. Computers:
 Total number: _____
 Total number in working condition: _____
5. Is there a resource center/library available to trainees?
 Yes ____ No ____
6. Is there a resource center/library available to teaching faculty?
 Yes ____ No ____
 If “yes”, are there any resource materials specifically on logistics management?
 Yes ____ No ____
7. Hostel facilities for trainees:
 - a. Sleeping facilities exist? Yes ____ No ____
 - b. Eating facilities exist? Yes ____ No ____
8. Overall condition of facility (lighting; ventilation; tables/chairs; electricity; noise level during class; etc.)

A-4: Regional Health Training Centres Questionnaire

LESSONS LEARNED EVALUATION – NEPAL

DATE OF INTERVIEW: _____

PRIMARY INTERVIEWER: _____

OTHER INTERVIEWERS: _____

FACILITY:

- ___ Regional Health Training Center, Eastern Region
- ___ Regional Health Training Center, Central Region
- ___ Regional Health Training Center, Western Region
- ___ Regional Health Training Center, Mid-Western Region
- ___ Regional Health Training Center, Far Western Region

NAME/TITLE OF PERSON/S INTERVIEWED:

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SECTION 1: DATA COLLECTED THROUGH INTERVIEWS

- A. Human Resources for Logistics Training
- B. Continuous Performance Improvement, Monitoring and Evaluation

SECTION 2: DATA COLLECTED THROUGH DOCUMENTATION

- A. Numbers of MOH Personnel Trained in Logistics Management Skills
- B. Number of RHTC Personnel Trained in Logistics Management Training Skills
- C. Printed Materials for Training
- D. Budgets for Training
- E. Workplans for Logistics Training

SECTION 3: DATA COLLECTED THROUGH ON-SITE OBSERVATION

- A. Training Infrastructure

**QUESTIONNAIRE
REGIONAL HEALTH TRAINING CENTERS**

SECTION 1: DATA COLLECTED THROUGH INTERVIEWS

A. HUMAN RESOURCES FOR LOGISTICS TRAINING

1. Total number teaching faculty at RHTC (at time of interview):
 Full-time _____
 Part-time _____
2. Total number teaching staff directly involved in logistics training:
 Full-time _____
 Part-time _____
3. Do written job descriptions exist for teaching faculty?
 Yes ____ No ____
4. How many teaching faculty have left their positions within the RHTC in the past two years?
 - a. Of this number, how many were transferred to teaching positions in other RHTCs?
 - b. Of this number, how many were transferred to non-teaching positions within NHTC/MOH?
 - c. What non-teaching positions were these people transferred to?
 - d. How many teaching faculty retired during this period?
 - e. How many NEW teaching faculty were hired within the past two years?
5. When teaching faculty involved in logistics leave the position for any reasons, how does the RHTC prepare new teaching faculty to conduct logistics training? (*NOTE: Does a system exist for ensuring that newly recruited teaching faculty are brought up to speed?*)
6. Describe the relationship between NHTC and the RHTCs:
 - a. What is NHTC's role in developing teaching materials/curricula for the RHTCs?
 - b. What is NHTC's role in scheduling each RHTC's annual training schedule?
 - c. What is NHTC's role specifically in scheduling logistics training at the RHTCs?

7. How did teaching faculty involved in logistics training gain their technical knowledge of logistics and of the Nepal health logistics system?
- a. Received logistics TOT from JSI/N and LMD _____
 - b. In-house TOT on logistics conducted by NHTC for teaching faculty _____
 - c. Other (describe): _____

8. Does the RHTC develop and implement refresher training for MOH personnel (not NHTC teaching staff)?

Yes ____ No ____

If “yes”, describe the process used to develop refresher training (*NOTE: Does RHTC identify the specific knowledge/skill gaps which indicate that refresher training is required?; How does RHTC consider refresher training different from basic training?*):

9. Does RHTC conduct refresher training for RHTC teaching staff?

Yes ____ No ____

If “yes”, describe the process used to identify the need for refresher training.

B. CONTINUOUS PERFORMANCE IMPROVEMENT, MONITORING AND EVALUATION (i.e., supervision; on-the-job training)

1. Does RHTC follow up and monitor the performance of trainees on the job?

Yes ____ No ____

- a. If “yes”, does a monitoring/evaluation plan exist?

Yes ____ No ____

- b. If “yes”, describe how this follow-up/monitoring takes place (*i.e., do RHTC faculty provide this follow-up/monitoring?; what takes place during such a follow-up visit?; etc.*):

- c. How frequently does this follow-up/monitoring take place?

- d. Is there a specific position within RHTC that is responsible for follow-up/monitoring of trainees? Yes ____ No ____

If “yes”, proceed with following questions

- i) What is this person’s position/title?
- ii) Describe this person’s responsibilities:

- e. Does a separate M/E budget exist for monitoring and evaluation visits?

Yes ____ No ____

- f. Does a separate budget exist for monitoring and evaluating personnel who have received logistics training?

Yes ____ No ____

- g. If RHTC is not mandated to provide ongoing monitoring and evaluation of trainees, where does this responsibility lie in the MOH?

- h. Who supervises the teaching faculty at RHTCs?

- i. In what specific areas do they supervise teaching faculty?

- j. How does NHTC monitor/supervise the quality of RHTC teaching faculty's skills in logistics training?

SECTION 2: DATA COLLECTED THROUGH DOCUMENT REVIEW

NOTE: Interviewer should request the following documents for review:

1. Numbers of MOH personnel trained by NHTC and RHTCs since 1997.
2. Copies of all training materials used by NHTC/RHTCs to conduct logistics training, including:
 - a. Trainer's Guides
 - b. Trainee materials such as handouts and procedures manuals
3. Annual Work Plan for implementing logistics training through RHTCs.
4. Budgets showing line item expenditures (proposed and actual) for logistics training.
5. Trainer/teaching faculty job descriptions.

A. NUMBERS OF MOH PERSONNEL TRAINED IN LOGISTICS MANAGEMENT SKILLS:

Total number personnel trained by NHTC and all RHTCs in logistics:

CADRE TRAINED	1997		1998		1999	
	NHTC	RHTC	NHTC	RHTC	NHTC	RHTC
District Health Officer						
Storekeepers (mukhtias)						
Health post & sub-health post						
Other:						

(NOTE: May need to use Nepali calendar)

B. NUMBER OF RHTC PERSONNEL TRAINED IN LOGISTICS MANAGEMENT TRAINING SKILLS:

CADRE TRAINED	1997	1998	1999
RHTC Personnel			

C. PRINTED TRAINING MATERIALS

1. Do Trainer's Guides exist for logistics training?

Yes ____ No ____

2. If yes, list the titles of the materials:

3. Do materials such as Procedures Manuals and/or handouts exist for trainees?

Yes ____ No ____

4. If yes, list the materials:

5. Do these materials use competency-based techniques?

All ____ Some ____ None ____

D. BUDGET FOR TRAINING

Of the total amount allocated for logistics training, what was the actual amount spent:

YEAR	AMOUNT ALLOCATED	ACTUAL AMOUNT SPENT
1997	Rs.	Rs.
1998	Rs.	Rs.
1999	Rs.	Rs.

(NOTE: May need to use Nepali calendar)

E. WORK PLANS FOR LOGISTICS TRAINING

1. Number logistics courses scheduled per year (1999):
 - Eastern Region RTC: _____
 - Central Region RTC: _____
 - Western Region RTC: _____
 - Mid-Western Region RTC: _____
 - Far Western Region RTC: _____
2. Of this number how many logistics courses were actually conducted?
 - Eastern Region RTC: _____
 - Central Region RTC: _____
 - Western Region RTC: _____
 - Mid-Western Region RTC: _____
 - Far Western Region RTC: _____
3. For those courses scheduled but not conducted, what were the reasons?
 - Eastern Region RTC: _____
 - Central Region RTC: _____
 - Western Region RTC: _____
 - Mid-Western Region RTC: _____
 - Far Western Region RTC: _____

SECTION 3: DATA COLLECTION THROUGH OBSERVATION**A. TRAINING INFRASTRUCTURE**

Describe the facilities available for conducting training at RHTC:

1. Total number classrooms available for training: _____
2. Audio-visual equipment:
 Total Number: _____
 Total number in working condition: _____
3. Photo-copy machines:
 Total number: _____
 Total number in working condition: _____
4. Computers:
 Total number: _____
 Total number in working condition: _____
5. Is there a resource center/library available to trainees?
 Yes ____ No ____
6. Is there a resource center/library available to teaching faculty?
 Yes ____ No ____
 - a. If “yes”, are there any resource materials specifically on logistics management?
 Yes ____ No ____
7. Hostel facilities for trainees:
 - a. Sleeping facilities exist? Yes ____ No ____
 - b. Eating facilities exist? Yes ____ No ____
8. Overall condition of facility (lighting; ventilation; tables/chairs; electricity; noise level during class; etc.)

A-5: Key Informant qualitative question guide

NEPAL KEY INFORMANT INTERVIEW GUIDE

GUIDE FOR THE INTERVIEW OF MANAGERS, DECISION-MAKERS, AND RESPONSIBLE STAFF FOR PROGRAMS FROM THE MINISTRY OF HEALTH AT CENTRAL AND REGIONAL LEVEL; SOCIAL MARKETING CENTRAL STAFF; FPAN CENTRAL STAFF; DONOR STAFF (INCLUDING USAID, DFID, UNFPA etc); AND, JSI STAFF.

Date: _____

Site: _____

Name of Interviewed _____

Position/Title of Manager _____

Name of Institution _____

Type of Institution _____

INTRODUCTION

Introduce yourself and FPLM, and express our appreciation to his/her willingness for interviewing with us. Explain that we plan to use the information for documenting lessons learned from the efforts made in contraceptive and essential drugs logistics in Nepal. It does not matter whether you believe the results are positive or negative, as these experiences will be useful results for Nepal and for other countries where FPLM conducts business. Please be candid in your responses to our questions. We will hold your feedback in strict confidence and any written report would not attribute quotations and comments to the individuals interviewed.

I. WARM UP

1. How does your position relate to family planning and contraceptive supply? How long have you been in this position? How often does your program deal with contraceptive and drugs supply information?
2. Do you ever communicate with MOH or their staff? If so, how often? For what reasons? How do you communicate? To whom you address this communication?
3. Do you ever communicate with FPAN or their staff? If so, how often? For what reasons? How do you communicate? To whom you address this communication?

4. Do you ever communicate with SOCIAL MARKETING or their staff? If so, how often? For what reasons? How do you communicate? To whom you address this communication?
5. Do you ever communicate with FPLM or their staff? If so, how often? For what reasons? How do you communicate? To whom you address this communication?
6. Do you ever communicate with the Nepal USAID Mission on contraceptive or drugs supply? Or with other donors? If so, how often? For what reasons? How do you communicate? To whom you address this communication?
7. Have you, or your staff, attended any training on contraceptive logistics? (*Continue regardless of whether the interviewed has or has not been trained for family planning logistics, just record this.*) When did you and your staff receive the training? Who sponsored the training? What were the salient ideas presented?

II. Current roles and responsibilities of the stakeholders in Nepal:

1. What, from your perspective, are the relative roles of MOH, FPAN and SOCIAL MARKETING in the overall family planning effort of the country?
2. What are the influences of the donors in this respect - particularly USAID and UNFPA? Others?
3. What commitments of resources for logistics have been given in the past (concerning your own organization) and what commitment is there for the future?
4. What relationship/contact have you had with FPLM in the past five years and what can you see changing for the future?
5. Has the presence of a JSI office (with regional offices) been significant in the distribution of contraceptives and essential drugs in Nepal?
6. What TA was successful/unsuccessful

III. Respondent's attitudes on the logistics system in Nepal:

1. What problems with contraceptive and drug supply have there been in the last three years? What trends in contraceptive use have you seen and have these trends affected supply? What trends in drug supply have you seen?
2. How has the supply of contraceptives been at the service delivery points of MOH/FPAN/SOCIAL MARKETING during the past three years? In your opinion, what have been the factors for this level of supply? Do service providers know who the donor of each type of contraceptive is?

3. Do you believe that data generated from the logistics information system provide the necessary information to make decisions for your program? (yes or no, and continue). Why? What type of logistics information does it provide? Who is responsible for processing and analyzing the information?
4. Does the information come in a timely manner to you? If yes how do you use the information you receive?
5. Who is responsible for forecasting contraceptive yearly needs of the program? What information do you use for making these estimations?
6. Who is responsible for forecasting the drug yearly needs of the program? What information do you use for making these estimations?

IV. Lessons Learned:

1. What have been the major factors contributing to successful logistics in the country? Have there been any barriers? How could these barriers or constraints be overcome?
2. What really worked? and why did it work ?
3. From your experience what mechanisms should be put in place to improve the logistics system in order to ensure that customers (clients) obtain the contraceptive and drug supplies they require?
4. What messages can we give to other countries from the Nepal experience?

V. Strengths and weaknesses:

1. What role does MOH/FPAN/SOCIAL MARKETING play in reproductive health, maternal health and child health strategies? What has been the strength of the logistics model?
2. What have been key elements for ensuring the availability of contraceptive and drug supply?
3. What are some of the weaknesses? Have there been appropriate stocks at all levels? Only at some levels? Which ones?
4. What difficulties the current model has faced? What strategies have been used to overcome these difficulties?

VI. Future Strategies

1. At the present time there is a once a year delivery of contraceptives. Is this appropriate ? Should the frequency change and if so what to?

2. What impact do you think there would occur if Nepal took responsibility for its own procurement of drugs?
3. What degree of sustainability exists in Nepal for the health programs? What would be the effects of donor phaseout?

VII. Wrap up

1. If we were to start all over again, from this point on, what are your suggestions for ensuring contraceptive and drug availability in Nepal?
2. What lessons have been learned from the current model?
3. Are there any points that you would like to discuss that we have not covered in relation to contraceptive and drug distribution?

Appendix B.

Consensus Projection of Contraceptive Commodities

FP Commodities for 2000 - 2004: Estimated Quantity Required										
		Expected Consumption = 12 months, Desired Stock = 24 months.								
	(a)	(b)	(c)	(d)	(e)				(f)	(g)
	Desired*	Expected	Desired	Total	Quantity Committed By Donor				End of Year	Unmet
Year	Opening Bal.	Consumption	Stock	Need	USAID	KfW	UNFPA	DFID	Balance	Need #
Condom										
2000	34,135,724	14,626,160	29,252,320	9,742,756	-	14,922,000	-	-	34,431,564	(5,179,244)
2001	34,431,564	17,258,868	34,517,736	17,345,040	-	18,612,000	-	-	35,784,696	(1,266,960)
2002	35,784,696	20,365,464	40,730,928	25,311,696	-	12,888,000	-	-	28,307,232	12,423,696
2003	40,730,928	24,031,247	48,062,494	31,362,813	-	-	-	-	16,699,681	31,362,813
2004	48,062,494	28,356,871	56,713,742	37,008,119	-	-	-	-	19,705,623	37,008,119
Oral Pill										
2000	2,087,602	787,962	1,575,924	276,284	-	-	-	716,529	2,016,169	(440,245)
2001	2,016,169	898,276	1,796,552	678,659	-	-	-	-	1,117,893	678,659
2002	1,796,552	1,024,034	2,048,068	1,275,550	-	-	-	-	772,518	1,275,550
2003	2,048,068	1,167,398	2,334,796	1,454,126	-	-	-	-	880,670	1,454,126
2004	2,334,796	1,330,833	2,661,666	1,657,703	-	-	-	-	1,003,963	1,657,703
Depo w/ Syringe										
2000	2,663,390	1,155,335	2,310,670	802,615	-	625,200	-	685,000	2,818,255	(507,585)
2001	2,818,255	1,317,081	2,634,162	1,132,988	-	850,000	545,094	726,000	3,622,268	(988,106)
2002	3,622,268	1,501,472	3,002,944	882,148	-	-	821,094	-	2,941,890	61,054
2003	3,002,944	1,711,678	3,423,356	2,132,090	-	-	-	-	1,291,266	2,132,090
2004	3,423,356	1,951,312	3,902,624	2,430,580	-	-	-	-	1,472,044	2,430,580

FP Commodities for 2000 - 2004: Estimated Quantity Required										
		Expected Consumption = 12 months, Desired Stock = 24 months.								
	(a)	(b)	(c)	(d)	(e)				(f)	(g)
	Desired*	Expected	Desired	Total	Quantity Committed By Donor				End of Year	Unmet
Year	Opening Bal.	Consumption	Stock	Need	USAID	KfW	UNFPA	DFID	Balance	Need #
IUD										
2000	23,049	6,949	13,898	(2,202)	8,600	-	-	-	24,700	(10,802)
2001	24,700	8,825	17,650	1,775	-	-	-	-	15,875	1,775
2002	17,650	11,207	22,414	15,971	-	-	-	-	6,443	15,971
2003	22,414	14,233	28,466	20,285	-	-	-	-	8,181	20,285
2004	28,466	18,075	36,150	25,759	-	-	-	-	10,391	25,759
Norplant w/ Trochar										
2000	12,772	5,653	11,306	4,187	-	-	-	2,000	9,119	2,187
2001	11,306	5,709	11,418	5,821	-	-	-	-	5,597	5,821
2002	11,418	5,766	11,532	5,880	-	-	-	-	5,652	5,880
2003	11,532	5,823	11,646	5,937	-	-	-	-	5,709	5,937
2004	11,646	5,881	11,762	5,997	-	-	-	-	5,765	5,997
* Desired opening balance for 2000 is actual.					# quantity to be ordered for which Funding is required					
Calculations:										
Total Need = Desired Stock - (Desired Opening Balance - Expected Consumption)										
End of Year Balance = (Desired Opening Stock - Expected Consumption) + Sum of quantity Committed										
Unmet Need = Total Need - Sum of quantity Committed										
Desired Opening Stock = if prior year Unmet Need < 0, then, Desired Stock + Prior Year's Surplus Quantity										
if prior year Unmet Need > 0, then, Desired Stock										
Note: Higher % increase in dispense rate is taken from HMIS and LMIS data of 1997/98 - 1998/99.										
Condom = 18% Depo = 14% Pills = 14% IUD = 27% Norplant = 1%										

FP Commodities for 2000 - 2004: Estimated Cost in US\$						
	Estimated Cost (US\$)					
Condom	USAID	KfW	UNFPA	DFID	Unmet Need	
2000	-	307,542	-	-	-	
2001	-	383,593	-	-	-	
2002	-	265,622	-	-	256,052	
2003	-	-	-	-	646,388	
2004	-	-	-	-	762,737	
Oral Pill						
2000	-	-	-	192,746	-	
2001	-	-	-	-	182,559	
2002	-	-	-	-	343,123	
2003	-	-	-	-	391,160	
2004	-	-	-	-	445,922	
Depo						
2000	-	587,688	-	585,675	-	
2001	-	799,000	466,055	620,730	-	
2002	-	-	702,035	-	52,201	
2003	-	-	-	-	1,822,937	
2004	-	-	-	-	2,078,146	
IUD						
2000	13,976	-	-	-	-	
2001	-	-	-	-	2,885	
2002	-	-	-	-	25,954	
2003	-	-	-	-	32,965	
2004	-	-	-	-	41,861	
Norplant						
2000	-	-	-	50,000	54,675	
2001	-	-	-	-	145,525	
2002	-	-	-	-	147,000	
2003	-	-	-	-	148,425	
2004	-	-	-	-	149,925	
Summary	USAID	KfW	UNFPA	DFID	Unmet Total	Year Total
2000	13,976	895,230	-	828,421	54,675	1,792,303
2001	-	1,182,593	466,055	620,730	330,969	2,600,348
2002	-	265,622	702,035	-	824,331	1,791,988
2003	-	-	-	-	3,041,875	3,041,875
2004	-	-	-	-	3,478,591	3,478,591
Total	13,976	2,343,445	1,168,091	1,449,151	7,730,441	12,705,104
For the Period of 2000 to 2004: Funding Required =					\$12,705,104	
Funding Committed =					\$4,974,663	
Funding Needed =					\$7,730,441	

FP Commodities for 2000 - 2004: Estimated Cost in US\$						
				Unit Price		
			Item	KfW	UNFPA/DFID	USAID
			Condom	0.02061	0.0272	0.0588
			Oral Pill		0.2690	0.2364
			Depoprovera	0.9400	0.8550	0.9900
			IUDs		1.6835	1.6251
			Norplant		25.0000	
				(Unit Price includes 9% Freight)		

Appendix C.

Data from field surveys

Table C-1 Stock Status Data

Condom

	Over	To Plan	Under	Stockout	S/O rate	% of time S/O	Wastage Rate
SDP	51.3	38.5	10.3	0.0	2.6	0.2	0.0
District	46.2	30.8	23.1	0.0	0.0	0.0	0.0
Region	40.0	60.0	0.0	0.0	20.0	13.8	0.0
Total	45.8	43.1	11.1	0.0	7.5	4.7	0.0

Depoprovera

	Over	To Plan	Under	Stockout	S/O rate	% of time S/O	Wastage Rate
SDP	51.3	46.2	2.6	0.0	23.1	4.5	1.8
District	38.5	38.5	23.1	0.0	7.7	0.9	0.0
Region	20.0	20.0	40.0	20.0	40.0	4.6	0.0
Total	36.6	34.9	21.9	6.7	23.6	3.3	0.6

Pills

	Over	To Plan	Under	Stockout	S/O rate	% of time S/O	Wastage Rate
SDP	64.1	20.5	5.1	10.3	20.5	5.0	14.3
District	69.2	23.1	7.7	0.0	0.0	0.0	0.0
Region	40.0	0.0	40.0	20.0	20.0	2.3	6.2
Total	57.8	14.5	17.6	10.1	13.5	2.4	6.8

Co-trimoxazole

	Over	To Plan	Under	Stockout	S/O rate	% of time S/O	Wastage Rate
SDP	36.8	23.7	7.9	31.6	52.6	36.5	0.0
District	53.8	23.1	15.4	7.7	30.8	12.7	0.0
Region							
Total	45.3	23.4	11.6	19.6	41.7	24.6	0.0

Vitamin A

	Over	To Plan	Under	Stockout	S/O rate	% of time S/O	Wastage Rate
SDP	36.8	28.9	15.8	18.4	18.4	13.2	1.2
District	23.1	46.2	30.8	0.0	0.0	0.0	0.0
Region							
Total	30.0	37.6	23.3	9.2	9.2	6.6	0.6

ORS

	Over	To Plan	Under	Stockout	S/O rate	% of time S/O	Wastage Rate
SDP	47.4	31.6	13.2	7.9	15.8	3.9	0.5
District	53.8	30.8	15.4	0.0	0.0	0.0	0.0
Region	60.0	20.0	20.0	0.0	0.0	0.0	0.0
Total	53.7	27.4	16.2	2.6	5.3	1.3	0.2

Ferrous Sulfate with Iron

	Over	To Plan	Under	Stockout	S/O rate	% of time S/O	Wastage Rate
SDP	28.9	36.8	10.5	23.7	34.2	15.4	4.1
District	53.8	38.5	7.7	0.0	7.7	4.7	0.0
Region							
Total	41.4	37.7	9.1	11.8	21.0	10.1	2.0

Appendix C (continued)

Table C-2 Storage Conditions

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Percent
Regional	100	60	60	60	80	60	100	100	80	80	80	60	60	20	100	100	100	100	78
District	64	64	43	50	79	50	100	100	79	50	93	64	71	0	86	79	93	79	69
SDP	72	74	79	67	92	62	97	100	100	72	97	69	49	0	92	69	85	72	75
Total sample	79	66	61	59	84	57	99	100	86	67	90	65	60	6.7	93	83	92	83	74
SDP East	50	100	83	83	100	33	100	100	100	67	100	83	17	0	100	67	83	67	74
SDP Central	100	100	100	100	100	67	100	100	100	67	100	100	100	0	100	100	100	100	91
SDP West	73	73	73	27	91	82	100	100	100	91	100	18	18	0	91	45	100	73	55
SDP Mid-West	91	55	82	82	91	45	91	100	100	73	91	91	64	0	82	91	73	73	76
SDP Far-West	50	75	75	75	88	75	100	100	100	50	100	88	75	0	100	63	75	63	75

Figure C-1

Storage conditions: Percent scores from an 18 point checklist

